

41 WA707 1001  
NO. 1  
C. 31  
SERIALS  
SI: MARYLAND MEDICAL JOURNAL  
Q

Med Chi:  
Your Voice in Annapolis

MMJ

Maryland Medical Journal  
JANUARY 1991

Endorsed by Med Chi  
for Maryland Physicians

© 1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.



## It's A Closed Box.

Simply put, your Medical Mutual premiums go into a closed box . . . and you own the box. We pay claims, we pay to defend physicians, we pay operating expenses. Any money left over belongs to you. That's it. No money goes to out-of-state owners, no money goes to subsidize operating expenses of a parent company located in another state. Dividends are paid to you, not to outside stockholders.

The physicians of Maryland planned it this way when you asked the Maryland General Assembly to create Medical Mutual to meet your special insurance needs. It's a concept that has worked well for over 15 years, and it's a concept that has made Medical Mutual the choice of the vast majority of physicians across the state.

The closed box. We're the only ones who operate this way. Why accept anything less?



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*

# MetPath



*"Your Partner in Practice"*

## Quality

- Quality assurance program directed by our full time QA manager and our technical director.
- Control samples of up to 10% of our work load.
- Outside proficiency program results, available to you by request.

## Service

- Courteous client service, 24 hours a day.
- Flexible specimen pick-up schedules.
- Customized requisitions.
- Specialized report formats.

## Convenience

- Comprehensive testing.
- 4 STAT labs.
- 27 Patient Service Centers.
- House call service in the Baltimore/Washington area.

**Regional Headquarters**  
1550 East Gude Drive  
Rockville, MD 20850  
(301)340-9800  
1(800)722-7393

**Baltimore**  
1246 East Joppa Road  
Baltimore, MD 21204  
(301)583-1500  
1(800)426-1676

Lab tours are welcome! Call Sales for an appointment.

a **CORNING** Clinical Laboratory



---

# MMJ

*Maryland Medical Journal*

---

JANUARY 1991

VOLUME 40 NO 1

## LEGISLATIVE ISSUE

<b>A Note from Med Chi's President and the Legislative Committee</b> . . . . .	25
<b>Defending Medicine in Maryland</b> . . . . .	26
<i>Angelo J. Troisi FACHE, Executive Director</i>	
Utilizing the services of Rifkin, Evans and Silver, in concert with the activities of Med Chi's Legislative Committee and input from the component societies, Med Chi looks forward to another successful year in Annapolis.	
<b>The 1991 Maryland General Assembly: What Can We Expect?</b> . . . . .	27
<i>Gerard E. Evans, Esquire and Gregory Don Hall PD, JD, LLM</i>	
Numerous issues affecting the practice of Medicine will likely be addressed in the 1991 Maryland General Assembly including Mandated Medicare Assignment, Regulation of Physician Fees, No-Fault Insurance, Triplicate Prescription, Physician Ownership, Fraudulent Claims, and AIDS.	
<b>New Friends in Annapolis</b> . . . . .	28
<b>Background on the Report of the Linowes Commission</b> . . . . .	30
<b>The Maryland State Budget Shortfall</b> . . . . .	31
<b>Protecting the Disabled From Discrimination</b> . . . . .	37
<i>Stephen C. Buckingham, Esq.</i>	
As a result of the recently enacted Americans with Disabilities Act of 1990 (ADA), physicians would be wise to examine their practices to assure that there are no actions taken with discriminatory intent.	
<b>The Medical and Chirurgical Faculty of Maryland</b>	
<b>1991 Maryland State Legislative Directory</b> . . . . .	43

## Editor

Victor R. Hrehorovich MD

## Associate Editor

Henry P. Laughlin MD, ScD, ScSD

## Managing Editor

Janet Campbell MS, MS

## Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

## Advisory Member

Carmine M. Valente PhD

## Art Director

Virginia Carter

## Graphic Assistant

Valentia McVey

## Communications Assistant

Lori Robinson

## Executive Director

Angelo J. Troisi FACHE

Communications Director

Michelle Burke MHA

## Maryland Advertising

Network Publications Corp.

2701 N. Charles St. - Ste. 400

Baltimore, MD 21218

(301-235-0500)

FAX (301-235-0689)

Copyright © 1991. MMJ Vol 40, No 1. The *Maryland Medical Journal* USPS 332080. ISSN 0025-4363 is published monthly by the Medical and Chirurgical Faculty of Maryland and is a membership benefit. Subscription rates: U.S. and U.S. possessions, one year: nonmembers \$35; foreign \$42. Single copy: members \$5; nonmembers \$7. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: send address changes to *Maryland Medical Journal*. 1211 Cathedral St., Baltimore, MD 21201-5585. FAX 301-547-0915.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

# DEPARTMENTS

Epidemiology and Disease Control Program . . . . .	9
...tuberculin screening procedure - Mantoux method	
President's Letter . . . . .	15
Executive Director's Newsletter . . . . .	17
Maryland Oncology Newsletter . . . . .	20
...breast cancer	
A Clinical Moment with . . . Diabetes . . . . .	22
...label reading	
Board of Physician Quality Assurance . . . . .	61

# MISCELLANY

Medical Miscellany . . . . .	64
Members in the News . . . . .	65
Letter from the Editor . . . . .	66
Doctors Note . . . . .	67
University of Maryland School of Medicine	
Miscellaneous Meetings	
The Johns Hopkins Medical Institutions	
Classified Ads . . . . .	72

**Cover: The Senate Chamber, Maryland State House, Annapolis, Maryland.** In this chamber, the forty-seven senators from Maryland's forty-seven legislative districts meet every year for the ninety-day legislative session. The Senate Chamber, which has two visitors' galleries, is decorated in red and white, the Crossland colors on the Maryland Flag. The statue to the left of the desk at the front of the chamber is of John Hanson, a Marylander and the first President of The United States in Congress Assembled (i.e., the first President under the Articles of Confederation in 1781). The statue on the right is of Charles Carroll of Carrollton, one of Maryland's four signers of the Declaration of Independence.

*Cover photo and design by Virginia Carter.*



# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.



*Lumbar Herniated Disc*

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)

### **TAX-DEFERRED ANNUITIES\***

- *Competitive rates of interest*
- *Tax-deferred interest until withdrawn*
- *Safety of investments*
- *Access to income*
- *Rate guarantees for 1-3-5 years*

**CALL TODAY!**

### **You Need More Security Than Social Security...**



INVESTMENTS OFFERED AT  
**REISTERSTOWN FEDERAL SAVINGS BANK**  
Through Time Financial Services, Inc.  
CALL KATHY WALDER or  
LAURA WORM  
at 833-2693, EXT. 221 or 220

### **LONG-TERM HEALTH CARE\***

- *Flexible coverage*
- *Guaranteed renewable*
- *Inflation protection available*
- *Lifetime benefit options*
- *Protection for Alzheimer's disease*





**CALL TODAY!**

\* Contracts are protected by the legal reserves of the issuing insurance company and are not FDIC insured.



## **PHYSICAL THERAPY**

Specializing in treatment for pain of the neck and back.

-  Prompt scheduling for your patients
-  Narrative reports sent to each referring physician
-  State-of-the-art facility, featuring isokinetic evaluation and exercise equipment
-  Therapy provided as prescribed

We welcome the opportunity to serve your patients

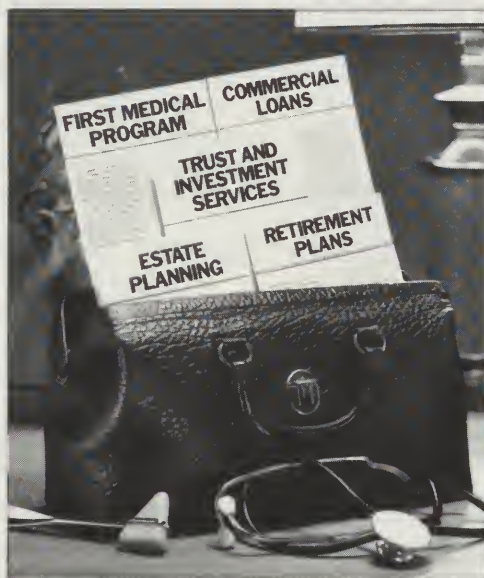
## **PYRAMID HEALTH SERVICES, INC.**

Robert J. Varley, P.T.

1001 North Point Boulevard • Baltimore, MD • 301-282-9259



# We provide "proper treatment" for every physician.



At First National Bank of Maryland, we know that time is extremely valuable to a physician. That's why we have made a major commitment to take care of **all** your financial needs with speed... accuracy... and a high level of personal service.

As part of our First Medical Program, we offer you a comprehensive package of customized services designed to satisfy your professional... and personal... financial requirements. Plus an experienced business banker who will work closely with you at your home or office.

To arrange for a confidential consultation, contact the First National Bank of Maryland office nearest you today. You'll find out we give you the treatment you deserve.

**Exceeding the Expected.**



Member FDIC/Federal Reserve System

**Allegany:** 777-4600/**Anne Arundel:** 280-5730/**Baltimore:** 832-7862/**Baltimore City:** 244-4092  
**Lower Eastern Shore:** 548-7200/**Upper Eastern Shore:** 479-3130/**Frederick:** 698-7850  
**Harford:** 836-5700/**Howard/Carroll:** 964-6810/**Montgomery:** 840-6300  
**Prince George's:** 952-5600/**Washington:** 790-6800

# ***The Personality Disorder Treatment Program of Sheppard Pratt Hospital***

Very often, specialized inpatient evaluation and treatment is a critical step in the effective care of a borderline patient.

The Personality Disorder Treatment Program at Sheppard Pratt offers a combination of services that may help to untangle difficult clinical questions and facilitate your patient's continued outpatient treatment.

We offer:

- ☐ Short-term and intermediate-term specialized inpatient treatment
- ☐ Extended-term intensive inpatient treatment
- ☐ Comprehensive diagnostic evaluation
- ☐ Psychotherapy and psychopharmacology consultation
- ☐ Intensive individual and group psychotherapy provided by our staff of psychiatrists and psychologists
- ☐ Long-term treatment planning

If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Adult Admissions Office at:

(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ *Sheppard Pratt*  
A not-for-profit health system





# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

January, 1991

## Tuberculin Screening Procedure --Mantoux Method and Interpretation of Results

### Administering Skin Tests

1. Cleanse the upper half of the inner aspect of forearm thoroughly with an alcohol swab.
2. Dry completely.
3. Withdraw 0.1 ml from Purified Protein Derivative (PPD) vial containing 5 tuberculin units (5TU) in a disposable tuberculin syringe. (Keep PPD under refrigeration until ready for use.)
4. Select site at least two inches below antecubital crease. (On tiny infants, select site on mid forearm).
5. With a 26 gauge 1/2 inch needle, inject PPD intradermally so that a small wheal (6-10mm) forms directly over the needlepoint. (The injection should be made just beneath the surface of the skin into the dermis with the needle bevel upward.)
6. Remove any leakage with a pledget.
7. Record date of test in chart and give instructions to patient to return for reading of the test.
8. Do not recap needle, dispose of needle and syringe into an appropriate puncture-resistant container.

### Reading Skin Tests

1. Read test 48-72 hours after administration.
2. In good light, palpate for presence or absence of induration.
3. When induration is present, using a millimeter rule, measure the transverse diameter (transverse relative to the long axis of the arm). Measure only induration, not erythema. Record in chart the size of induration in millimeters, the name of antigen, and the date of reading.

### Centers for Disease Control Guidelines for Interpreting Skin Tests

**5 or more millimeters induration is considered positive for the highest risk groups, such as:**

- Persons with HIV infection;
- Persons who have had close contact with an infectious tuberculosis case;

- Persons who have chest radiographs consistent with old, healed tuberculosis and,
- Intravenous drug users whose HIV status is unknown.

**10 or more millimeters induration is considered positive for other high risk groups, such as:**

- Foreign-born persons from high prevalence areas (such as Asia, Africa, and Latin America);
- Intravenous drug users known to be HIV seronegative;
- Medically-underserved low income populations, including high-risk racial or ethnic minority populations (especially Blacks, Hispanics, and Native Americans);
- Residents of long-term care facilities (such as correctional institutions, nursing homes, mental institutions);
- Persons with medical conditions which have been reported to increase the risk of tuberculosis such as silicosis, being 10 percent or more below ideal body weight, chronic renal failure, diabetes mellitus, high dose corticosteroid and other immunosuppressive therapy, some hematologic disorders (such as leukemias and lymphomas), and other malignancies;
- Locally identified high risk populations;
- Children who are in one of the high risk groups listed above; and,
- Health care workers who provide services to any of the high risk groups.

**15 or more millimeters induration is considered positive for persons with no risk factors for tuberculosis.**

**Negative Reactions** - For each of the categories, reactions below the cut off point are considered negative.



## Transmission of Hepatitis B Virus Associated with a Spring-Loaded Fingertick Device

*The purpose of this notice is to inform health care workers of a potential risk of hepatitis B transmission associated with improper use of spring-loaded lancet devices to obtain capillary blood samples. The following report summarizes an article that appeared in the Morbidity and Mortality Weekly Report, September 7, 1990, p.610-2. This report and others underscore the importance of avoiding cross contamination when using these devices. Health care workers should ensure that this information is communicated to appropriate staff.*

In March 1990, staff in a hospital in California noted an increase in the number of patients diagnosed with acute hepatitis B (HB). From June 1989 through May 1990, 20 patients with HB were identified compared to four such patients in June 1988 through May 1989. Review of the medical records of the 20 patients indicated that 1) all had been admitted to one medical ward during the 6 months before becoming HBsAg-positive; 2) 18 had diabetes mellitus; 3) during hospitalization, capillary blood samples were obtained from 19 patients to measure blood glucose levels using a spring-loaded device to prick the finger; and 4) one patient with diabetes who had been admitted March 15, 1989, was a hepatitis B virus carrier and may have been the source of the outbreak.

Additional testing of patients who had been hospitalized on the medical ward identified seven additional cases, for a total of 27 persons with acute HB admitted after the HBV carrier patient. Only seven (26%) of the 27 were symptomatic.

Retrospective cohort and case control studies determined that among patients with diabetes, HB occurred in 23 (42%) of 55 who had fingersticks by the spring-loaded device compared with none of five who did not have fingersticks ( $p=0.08$ ). Case-patients had a higher mean number of fingersticks, a higher mean number of insulin injections, and a longer mean length of hospital stay. Among patients without diabetes, three of four had capillary blood sampling by fingerstick with the spring-loaded device compared to none of 20 controls ( $p=0.002$ ).

The index patient was a woman with diabetes who had onset of HB in June 1989; she had been hospitalized continuously for 11 years with amyotrophic lateral sclerosis and had no risk factors for HB other than fingersticks with the spring-loaded device. (Her source may have been a carrier admitted in March 1989.) Because she was hospitalized and became an HBV carrier, she served as a long-term reservoir for HBV on the medical ward.

The hospital indicated that only one type of spring-loaded capillary blood sampling device was used in its inpatient services; this device employs a disposable

lance to prick the skin and a disposable platform to stabilize the device on the finger and control the depth of the puncture. Interviews with the nursing staff indicated that although the nurses always changed the lancets between uses, they did not routinely change the platform after each use or clean the device between uses on different patients.

### Editorial Note:

This is the first reported outbreak of HB associated with the use of fingerstick devices in the United States. An HB outbreak in which a similar fingerstick device was implicated was recently reported in France. That investigation found that the platform of the sampling device had visible blood contamination in 20 (24%) of 85 finger-sticking tests, suggesting that the platform may be easily contaminated with blood from the skin puncture.

HBV circulates in the blood at high titers and can remain viable for at least 1 week in blood samples that have dried on surfaces. **The following recommendations should be followed when using any device to obtain capillary blood samples:**

- Lancets and platforms should be changed after every use of the spring-loaded device; always order an equal number of platforms or endcaps when reordering lancets.
- Because platforms may not be routinely changed after each use, fingerstick devices with disposable platforms optimally should be used only on individual patients.
- If used on multiple patients, after disposal of the lancet and platform, the device should be cleaned and disinfected at the end of the day and more frequently if visibly contaminated with blood.
- Some spring-loaded fingerstick devices do not employ disposable platforms. Use of these devices also optimally should be restricted to one patient, but if used on multiple patients, the lancet should be discarded and the device disinfected between patients.
- The FDA recommends that the manufacturers' guidelines for disinfection be followed. When no instructions for disinfection are provided, the device should be discarded.
- Fingerstick devices that do not have disposable lancets should be restricted to use in only one patient and, because they cannot be disinfected, should be discarded when no longer needed by the patient.
- Dispose of both lancets and platforms in an appropriate sharps container.



# IMPORTANT INFORMATION ABOUT PNEUMOCOCCAL DISEASE AND PNEUMOCOCCAL POLYSACCHARIDE VACCINE

PLEASE READ THIS CAREFULLY

PNEUMOCOCCAL  
9/1/89

**WHAT IS PNEUMOCOCCAL DISEASE?** *Streptococcus pneumoniae* is a bacterium that causes much illness and death in the United States each year. This bacterium, also called the Pneumococcus, can cause serious infections of the lungs (pneumonia), the bloodstream (bacteremia), and the covering of the brain (meningitis). About 5 persons out of every 100 who get pneumococcal pneumonia, about 20 out of every 100 who get bacteremia, and about 30 out of every 100 who get meningitis die of these infections. Anyone can get pneumococcal disease; however, persons over 65 years of age, the very young, and persons of any age who have special types of health problems have the greatest risk.

People are more likely to die from pneumococcal disease if they have problems such as alcoholism, heart or lung disease, kidney failure, diabetes, or certain types of cancer. Older persons as a group are more likely to die from pneumococcal disease. Forty out of every 100 persons who have these special health problems die when they develop pneumococcal bacteremia and 55 out of 100 with these special health problems die if they get pneumococcal meningitis. The high risk of death occurs in spite of treatment with drugs like penicillin. Because of the risk of serious complications from pneumococcal infection, vaccination is recommended for older persons and for children and adults with special health problems.

## **PNEUMOCOCCAL POLYSACCHARIDE VACCINE:**

The pneumococcal polysaccharide vaccine contains material from the 23 types of pneumococcal bacteria that cause 88 percent of pneumococcal bacteremias. Most healthy adults

who receive the vaccine develop protection against most or all of these types of pneumococcal bacteria 2-3 weeks after vaccination. Older persons and those with some long-term illnesses may not respond as well or at all. Children under 2 years of age are also not protected by the vaccine. The vaccine probably provides long-term protection for most people. However, some people may lose protection about six years after vaccination and require revaccination. Persons in need of revaccination are discussed in the "Revaccination" section. The vaccine is given by injection.

## **WHO SHOULD RECEIVE PNEUMOCOCCAL POLYSACCHARIDE VACCINE?**

Vaccination is recommended for the following:

### **Adults**

1. All adults aged 65 years and older and adults of all ages with long-term illnesses that are associated with a high risk of getting pneumococcal disease, including those with heart or lung diseases, diabetes, alcoholism, cirrhosis, or leaks of cerebrospinal fluid (CSF, the fluid surrounding the brain and spinal cord).
2. Adults with diseases that lower the body's resistance to infections or who are taking drugs that lower the body's resistance to infections, including those with abnormal function or removal of the spleen, Hodgkin's disease, lymphoma, multiple myeloma, kidney failure, nephrotic syndrome (a type of kidney disease) or conditions such as organ transplantation.

(PLEASE READ OTHER SIDE)

- Adults with and without symptoms who are infected with the AIDS virus (HIV infection).

#### Children

- Children 2 years of age and older with long-term illnesses that are associated with a high risk of getting serious pneumococcal infections. This includes children with abnormal function or removal of the spleen, as well as those who have sickle cell disease, nephrotic syndrome (a type of kidney disease), or CSF leaks (leaks of cerebrospinal fluid which surrounds the brain and spinal cord), or who have diseases that lower the body's resistance to infections or are taking drugs that lower the body's resistance to infections.
- Children 2 years of age and older infected with the AIDS virus, both with and without symptoms.

(Note- Frequent diseases of the upper respiratory system, including infections of the ear or sinuses, in children who are otherwise healthy, are *not* reasons to use this vaccine.)

#### SPECIAL GROUPS

Persons living in special places or settings with a high risk of getting pneumococcal disease, such as certain Native American (i.e., American Indians) populations.

#### General Considerations

Although this vaccine may not be as effective in some persons, especially those who do not have normal resistance to infections, vaccination is still recommended for such persons because they are at high risk of developing severe disease.

#### POSSIBLE SIDE EFFECTS FROM THE VACCINE:

About half of those who are given pneumococcal vaccine have very mild side effects, such as redness and pain at the injection site. Less than 1 percent of those given pneumococcal vaccine may develop fever, muscle aches, and severe local reactions. Serious side effects, such as severe allergic reactions, have rarely been reported. Revaccination after periods

longer than 13 months from the first vaccination has not been shown to increase the occurrence of side effects. As with any drug or vaccine, there is a rare possibility that allergic or more serious reactions or even death could occur.

**REVACCINATION:** Revaccination should be considered for certain groups:

- Persons at highest risk of fatal pneumococcal infection, such as those with abnormal function or removal of the spleen who received the original pneumococcal vaccine (between 1977 and 1983), or who received the current vaccine (available from 1983 to the present) 6 or more years ago.
- Other persons shown to lose protection rapidly, such as persons with nephrotic syndrome, kidney failure, or transplants, who received the current vaccine (available from 1983 to the present) 6 or more years ago.
- Children aged 10 years or younger with nephrotic syndrome, abnormal function or removal of the spleen, and sickle cell anemia who received the vaccine 3 to 5 years ago.

**PREGNANCY:** The safety of pneumococcal vaccine for pregnant women has not been studied. It should not be given to healthy pregnant women. Women who are at high risk of pneumococcal disease and who are candidates for pneumococcal vaccine ideally should be vaccinated before pregnancy.

**QUESTIONS:** If you have any questions about pneumococcal disease or pneumococcal polysaccharide vaccine, please ask now or call your doctor or health department before you sign this form.

**REACTIONS:** If the person who received the vaccine gets sick and visits a doctor, hospital, or clinic during the 4 weeks after receiving the vaccine, please report it to:

#### PLEASE KEEP THIS PART OF THE INFORMATION SHEET FOR YOUR RECORDS

PNEUMOCOCCAL 9/1/89

*I have read or have had explained to me the information on this form about pneumococcal disease and pneumococcal polysaccharide vaccine. I have had a chance to ask questions which were answered to my satisfaction. I believe I understand the benefits and risks of the pneumococcal vaccine and request that the vaccine be given to me or to the person named below for whom I am authorized to make this request.*

INFORMATION ABOUT PERSON TO RECEIVE VACCINE (Please Print)					FOR CLINIC USE
LastName	First Name	M	Birthdate	Age	Clinic Ident.
Address					Date Vaccinated
City	County	State	Zip		Manufacturer and Lot No.
X Signature of Person to receive vaccine or person authorized to make the request.					Site of Injection



# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



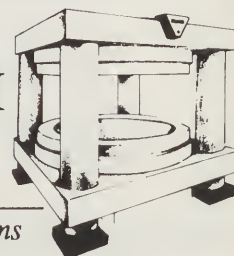
Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS™ MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and pediatrics. Our team of trained professionals will help your staff provide the best care available to your patients.

At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



**GREATER BALTIMORE  
MRI CENTER, INC.**


110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*

# Care of Your Patients

## .... Not Your Billing

A large, messy pile of crumpled and discarded medical bills, with some bills clearly labeled 'BILL' and 'PAID'. The bills are scattered across the lower half of the slide, suggesting a chaotic and overwhelming billing process.

• • •

Will speed up your cash  
and cure ailing accounts.

• • •

- Professional management available to represent your office to Medicare, Blue Shield, Medical Assistance and other insurance carriers.
- Our service relieves your staff from processing claims and self-pay statements.
- Self-pay bills with individualized messages are automatic at your prescribed intervals.
- Commercial insurance claims are automatically rebilled.
- A multitude of statistical reports are available including complete financial audit trails and management reports.

● ● ●

1•800•969•8382  
1•301•825•5626

# A New Strategy to Improve Patient Care

**H**ealth can be maintained by teaching patients good care habits. Especially for those with needs related to:

- diabetes including gestational diabetes
- weight reduction and maintenance
- dietary problems of all types
- stress management

Now the time consuming burden of patient training can be transferred from a busy practice to a competent health care team. A certified nurse educator, master trained dietitians and behavior counselors will return the patient well educated to their primary care physician.

### Training Programs Include:

- 20-hour courses, children and adults
- glucose monitoring
- ambulatory insulin instruction
- diabetes and pregnancy
- gestational diabetes

- weight reduction and maintenance
- modified fasting: Optifast
- limited diets: Optitrim
- full food control: LEARN<sup>®</sup>
- stress management

- all medical disorders

International  
Diabetes Center

LEARN®

OPTIFAST<sup>®</sup>  
OPTITRIM<sup>®</sup>

GBMC  
AGENCY, INC.

Greater Baltimore Medical Center  
Physicians Pavilion, Suite 406  
6565 North Charles Street • Baltimore, Maryland 21204



# The President's Letter

Prepared by the President of the Medical and Chirurgical Faculty of Maryland as a service to its members



Medical  
and Chirurgical Faculty  
of Maryland

January 1991

## It Works When We All Are Together - Physicians and Representatives Alike...

Dear Colleague:

Thank you! Your hard work and efforts to have the CLIA-88 federally-proposed clinical laboratory regulations rewritten have paid off. Health and Human Services Secretary, Louis W. Sullivan, and Health Care Financing Administration (HCFA) Director, Dr. Gail Wilensky, have indicated that major portions of the regulations will have to be rewritten based on more than 50,000 comments received during the 120-day extended comment period. Included in the comment count are more than 250 letters from members of Congress.

Maryland physicians should be exceptionally pleased and sincerely grateful to Senator Barbara A. Mikulski, one of the law's original sponsors, who cautioned HCFA to develop final regulations based on the best available scientific information and common sense to make the regulations both practical and effective without sacrificing access to needed care. We applaud the Senator's responsiveness to this crucial access issue.

In an unprecedented action, the Executive Office of the President, the Office of Management and Budget, has formally commented on the proposed regulations by saying that "it is not clear that the regulatory objectives (of CLIA-88) are chosen to maximize the net benefits to society." It further stated that HCFA should finish a regulatory impact analysis assessing the costs and benefits of the chosen approach before publishing a final rule.

Dr. Gail Wilensky indicated the need to reassess the levels of testing and personnel standards. She also indicated the need to reassess ways to accommodate and encourage evolving technologies.

The American Medical Association (AMA) will ask HCFA to publish any significant redraft of the regulations so that physicians and others can comment on any "new" approach. Estimates at this time indicate that a final rule will not be completed for eight to twelve months.

Med Chi will keep you apprised of continuing CLIA-88 developments as they occur.

Thank you, once again, for your timely response to this critical practice issue.

Sincerely,

A handwritten signature in dark ink, reading "Reynaldo L. Lee-Llacer MD". The signature is fluid and cursive, with a large initial 'R'.

Reynaldo L. Lee-Llacer MD  
President



# ***OK, Doctor. Tell me where it hurts.***

Is your office management system giving you a pain? ***We can help!***  
Call and tell us your symptoms.

- ▲ "Patient billing and insurance forms take forever to get out!"
- ▲ "I looked in my checkbook and wondered where all the money had gone."
- ▲ "I don't know if I can meet the new Medicare requirements for billing, but I sure don't want to be fined!"
- ▲ "I'd hate to have my records subjected to a malpractice review right now."
- ▲ "My staff is buried in paperwork, but I can't afford to hire more people."
- ▲ "Our patient scheduling and recall system has fallen apart."
- ▲ "We got a computer to speed up our work, but the service we get is incredibly slow."

**CALL TOLL FREE, TODAY. 1 (800) 776-2454**

**P R I S M**  
MEDICAL SYSTEMS

Baltimore, MD  
(301) 494-0992

Fairfax, VA  
(703) 359-0777

Richmond, VA  
(804) 330-9225

Winchester, VA  
(703) 662-4545



effectively meet your needs as a Maryland physician, Med Chi must maintain an extensive framework of committees to uphold prior commitments, manage current programs, and formulate new policy. It is essential that these committees be comprised of interested members so that Med Chi will remain a strong, viable, and active organization.

Please indicate your willingness to serve by checking your committee reference and special interests on the reply card. Every effort will be made to appoint you to the committee of your choice.

I intend to appoint as many members as possible to committees to ensure Med Chi's continued growth as the leading voice for medicine in Maryland.

Thank you for your support.  
J. David Nagel MD  
President-elect

I am interested in serving on the following Med Chi committees.

- ☐ AIDS Committee
- ☐ Alcoholism and Chemical Dependency Committee
- ☐ Computers in Medicine Committee
- ☐ Continuing Medical Education Review Committee
- ☐ Drugs Committee
- ☐ Emergency Medical Services Committee
- ☐ Finance Committee
- ☐ Hospital Medical Staffs Committee
- ☐ Insurance Fund of Med Chi Committee
- ☐ Legislative Committee
- ☐ Liaison Committee with Medical Assistance Program
- ☐ Library and History Committee
- ☐ Long Term Care and Geriatrics Committee
- ☐ Managed Care and Third Party Liaison Committee

☐ Other Interests: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

Zip: \_\_\_\_\_

County: \_\_\_\_\_

- ☐ *Maryland Medical Journal* Editorial Board
- ☐ Medicine and Religion Committee
- ☐ Mediocolegal Committee
- ☐ Mental Health Committee
- ☐ Music Medicine Clearinghouse Committee
- ☐ Occupational Health Committee
- ☐ Peer Review Committee
- ☐ Physician/Patient Relations Committee
- ☐ Physician Rehabilitation Committee
- ☐ *Physician's Practice Digest* Editorial Board
- ☐ Professional Ethics Committee
- ☐ PRO Monitoring Committee
- ☐ Public Health Committee
- ☐ Public Relations Committee
- ☐ Small Area Practice Variations Committee
- ☐ Specialist Identification Committee
- ☐ Specialty Societies Committee
- ☐ Young Physicians Committee

**Place  
Stamp  
Here**

Medical and Chirurgical Faculty of Maryland  
1211 Cathedral Street  
Baltimore, Maryland 21201-5585



## Executive Director's Newsletter

January 1991

### Committee Selection Cards

### Physician Volunteers for the Board of Physician Quality Assurance Needed

Med Chi members interested in serving on a Med Chi committee during 1991-1992 should complete the committee selection card following this newsletter. All members should complete this card by March 31, 1991 in order to be considered for appointment to a Med Chi committee.

Med Chi is seeking practicing licensed Maryland physicians who are interested in serving as members of the Board of Physician Quality Assurance. Med Chi is responsible for submitting a list of physicians who meet this requirement to the Governor. Med Chi is soliciting for volunteers from component medical societies and is advertising in the news media for volunteers to fill a potential vacancy created by an anticipated resignation.

Med Chi membership is not a requirement for appointment to the Board of Physician Quality Assurance.

If you are interested in serving on the Board of Physician Quality Assurance, please send your curriculum vitae to:

Executive Director, Med Chi  
1211 Cathedral Street  
Baltimore, MD 21201-5585

For more information contact the Executive Director at 301-539-0872 or 1-800-492-1056.

## No-Fault Insurance

Since there has been a great deal of misunderstanding among some members concerning the no-fault issue, the following is provided for your information. Interestingly, there has been no change in the basic philosophy on this matter from the earliest considerations through to the official policy adopted by Council during its November 15, 1990 meeting.

In August, Med Chi President, Reynaldo L. Lee-Llacer MD, established an ad hoc committee to study this issue and submit reports to the Executive Committee. The Executive Committee reviewed the ad hoc committee's reports and forwarded a recommendation to the Med Chi Council for consideration at its meeting on September 15, 1990.

The Baltimore City Medical Society and the Baltimore County Medical Association also proposed resolutions on this issue which were forwarded to the Council for the September 15, 1990 Semiannual meeting. The Council discussed this issue at length and remanded back to the Executive Committee the two resolutions as well as the ad hoc committee's recommendations for extensive review by the Executive Committee. The Executive Committee then presented its recommendation to the Council which passed the following resolution on November 15, 1990:

*"The Medical and Chirurgical Faculty has no position on the basic issue of no-fault auto insurance. This position does not preclude the Faculty from taking action on issues related to no-fault insurance such as medical definitions, medical care, or physician fees which directly affect the practice of medicine. Therefore, the Legislative Committee is directed to keep abreast of any no-fault legislation introduced and to make appropriate recommendations to the Executive Committee on issues in such legislation which affect the practice of medicine." (Med Chi Council, 11/15/90).*

This position, therefore, is the result of two intensive deliberations by Council as well as two reviews by the Executive Committee, several ad hoc committee meetings, and input from the Baltimore City Medical Society and the Baltimore County Medical Association.

---

## *Medical Mutual Announces 20% Dividend Credit*

---

The Medical Mutual Liability Insurance Society of Maryland recently announced that all Medical Mutual members will receive a 20 percent dividend credit off their total professional liability insurance premium when their policies renew in 1991. This credit is in addition to any discounts that a member may receive. This special dividend credit is the direct result of the cumulative effects of tort reform and insurance legislation. In the time since the first measures went into effect on July 1, 1986, it appears that the claims side of the liability situation has stabilized somewhat. Both Med Chi and Medical Mutual are indebted to Governor William Donald Schaefer and the General Assembly for making this reform possible. Most importantly, Med Chi is grateful to the physicians who responded to Med Chi's call for action on this issue.

---

## *Medical Mutual Offers Policy "Freeze" for Physicians on Active Military Service*

---

Medical Mutual recently announced that, as the Persian Gulf Crisis continues, it will suspend or "freeze" current professional liability insurance policies for its members who are called to active military service.

Under the policy freeze, you will owe no premium for the time that you are away. Medical Mutual will, however, cover claims related to treatment provided to civilian patients prior to your military service which are reported during such service, in accordance with the terms of your policy.

When you return from military duty, notify Medical Mutual to resume your coverage and you will be credited for any monies outstanding at the time you went on duty and you will be sent a corrected invoice for the remainder of the policy year. Time served with the military does not move you forward toward an increased claims-made year, and it does not earn time toward the 15-year tail, the 5-year retirement tail, or any other credit or benefit which is related to the number of years you are insured with Medical Mutual; policies are truly "frozen" during the time you are away.

If you are called to duty, please contact your Medical Mutual broker or member services representative immediately to suspend your policy (301-785-0050 or 1-800-492-0193).

---

## *1991 Annual Meeting*

---

Med Chi's 193rd Annual Meeting will be held on Wednesday, May 8 thru Saturday, May 11, 1991 at the University of Maryland Center of Adult Education in College Park, Maryland. A pre-registration flyer is packaged with this issue of the *MMJ* for your convenience. Mark your calendar, send in your pre-registration form and watch future issues of the *MMJ* for more details about the meeting. To pre-register by phone or for additional information, call Michael Moran at 301-539-0872 or 1-800-492-1056.

---

## *1991-1992 Med Chi Membership Directory*

---

A copy of the 1991-1992 *Med Chi Membership Directory* is being mailed to you with this issue of the *Maryland Medical Journal*. The *Directory* lists all Med Chi members by county and is an excellent resource for all Maryland physicians. This year's *Directory* features Med Chi officers, Med Chi 1991 meeting dates and component society contacts. The last section of the *Directory* includes an allied health professional listing of medical services that may benefit your patients. To order an additional *Directory* or to update your *Directory* listing, contact Wanda Griebel at 301-539-0872 or 1-800-492-1056.



---

## Legislative Directory

---

Beginning on page 43 of this issue of the MMJ is *Med Chi's 1991 Maryland State Legislative Directory*, a reference guide designed to familiarize physicians with their state representatives and the legislative process. This *Directory* provides lists of Maryland Senators and Delegates with their addresses and phone numbers. This guide also provides descriptions of the legislative process and dates of interest during the session. Physicians are strongly encouraged to use this valuable resource throughout the 1991 legislative session.

---

## Physician's Practice Digest

---

The premiere issue of the *Physician's Practice Digest (PPD)* has been enthusiastically received by readers in Maryland and across the country (See letter from the editor on page 66). If you have any suggestions, opinions or an interest in contributing articles to the next *PPD*, scheduled to be mailed on April 1, 1991, please send correspondence to Editor, *Physician's Practice Digest*, 1211 Cathedral Street, Baltimore, MD 21201.

---

## Straight Forward

---

In the coming weeks, all Maryland physicians will receive the January issue of *Straight Forward*, a newspaper designed to inform Maryland physicians about news and information related to drug and alcohol rehabilitation. This issue of *Straight Forward* is dedicated to AIDS and Chemical Dependency and includes an article on Med Chi's October Drug Conference. If you have any suggestions, opinions or an interest in contributing articles to *Straight Forward*, contact Vivian Smith at 301-539-0872 or 1-800-492-1056.

---

## New Music Medicine Committee

---

The Ad Hoc Music Medicine Clearinghouse Committee became the standing Music Medicine Clearinghouse Committee at the Semiannual meeting in September. Committee members are currently developing a session for the 1991 Annual Meeting which will focus on upper extremity problems of instrumental musicians. The Music Department at Towson State University has expressed interest in setting up a formal liaison with the committee to study the possibility of cooperative educational efforts, research, etc. The Clearinghouse staff has been chosen as the information provider for the Student Musician Pilot Project, currently under development by the International Arts-Medicine Association (IAMA). This project will provide monthly information packets to selected conservatories throughout the United States. Grant funding as well as the actual division of responsibilities between the Clearinghouse and IAMA have yet to be worked out. Med Chi staff member and Clearinghouse Coordinator, Susan E. Harman, authored a chapter in the *Textbook of Performing Arts Medicine*, edited by Robert Sataloff MD, Alice Brandfonbrener MD and Richard Lederman MD, which was recently published by Raven Press. For more information about Clearinghouse activities, contact Susan Harman at 301-539-0872 or 1-800-492-1056.

---

## Doctor/Lawyer/ Teacher Partnership Against Drugs

---

Physicians from the Baltimore metropolitan area interested in volunteering for the Doctor/Lawyer/Teacher Partnership Against Drugs are invited to attend one of the volunteer orientation sessions on January 7th and 9th at 6 p.m. in the Med Chi Faculty Building. Additional physician volunteers are needed to participate in this new program that will bring doctor/lawyer education teams into schools to talk with 7th graders about the hazards of drug use. To register for the meeting or to volunteer for the program, contact Betsy Newman at 301-539-0872 or 1-800-492-1056.

---

## *Living Wills and Powers of Attorney for Health Care*

---

Below is a brief explanation of the legal status of, and relationship between, the living will and the power of attorney for health care which was provided by the Maryland Office of the Attorney General. Physicians with questions or comments regarding this relationship should contact Steve Buckingham at 301-539-0872 or 1-800-492-1056.

In the view of the Attorney General, Maryland law affords competent persons the right to make their own decisions about whether to accept medical treatment, including life-sustaining treatment. There are three ways in which a person can make this kind of decision in advance, so that the person's wishes can be carried out even if the person later becomes disabled:

1. through a discussion with his or her physician, the essence of which is reflected in the patient's medical records;
2. in a living will; and
3. in a power of attorney for health care.

In two opinions in the past two years, the Attorney General has tried to clarify what these latter two legal documents are and how they might be used.

In brief, a living will is a formal advance decision by the individual to decline life-sustaining treatment when death is imminent as a result of a terminal illness. The living will is meant to speak for itself; it amounts to an instruction from the patient to the physician to be carried out when the conditions specified in the law are satisfied.

A power of attorney for health care is a different kind of document. In its most basic form, this kind of power of attorney is a statement by the patient that, in the event of the patient's disability, a named person - the agent - is to have the same decision-making power about treatment choices that the patient would have if he or she were still competent. The agent would then make decisions based on the agent's sense of what the patient would want. A power of attorney may, but need not, go on to contain instructions to the agent about how to decide particular issues - for example, when to decline life-sustaining treatment on the patient's behalf.

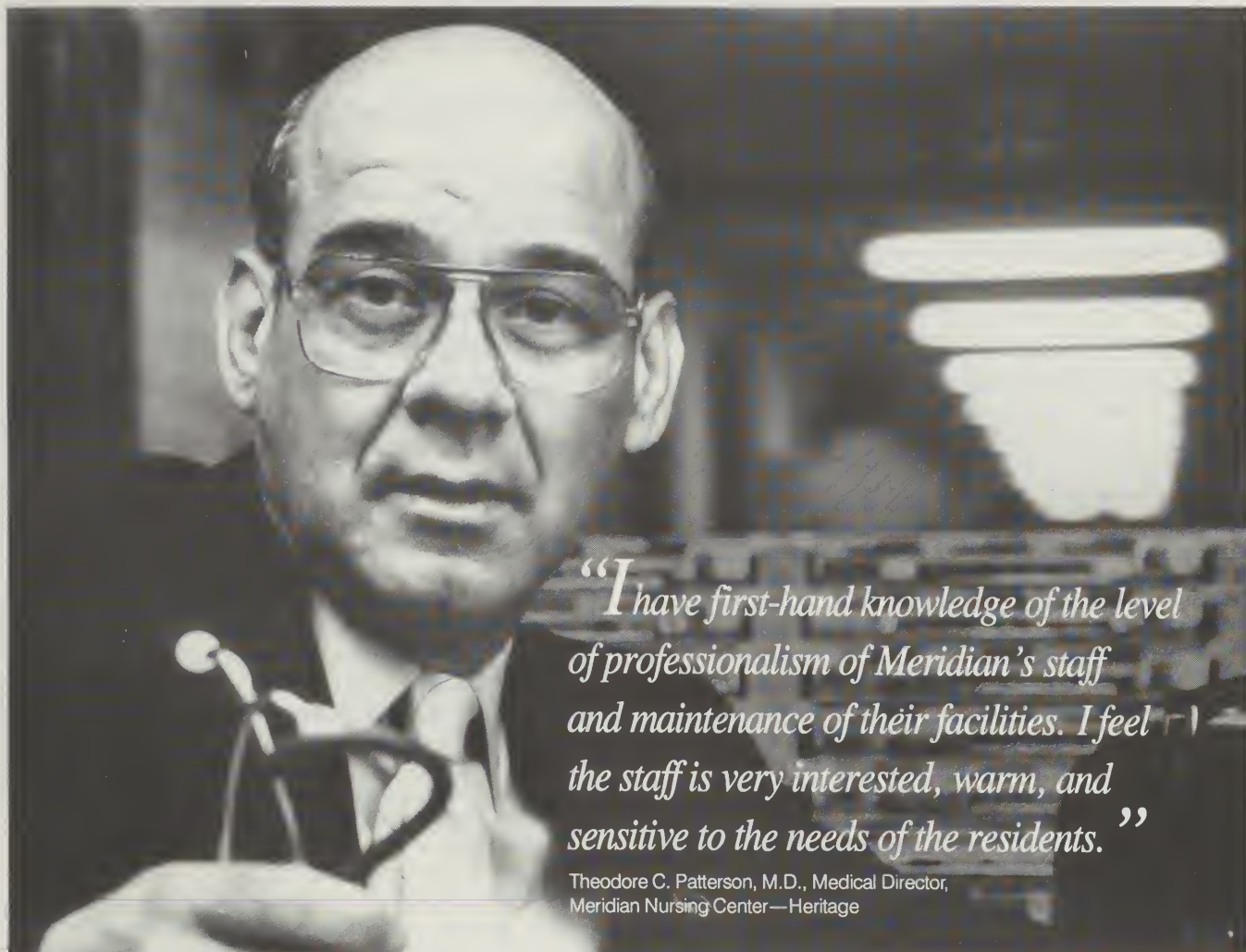
The durable power of attorney has several advantages over the living will. It gives the designated agent legally effective decision-making authority over the full range of medical decisions, many of which cannot be precisely anticipated in advance. Moreover, it is not limited, as the living will is, to situations of imminent death from a terminal illness. A power of attorney can be used, for example, to empower an agent to decline life-sustaining treatment in the event of a persistent vegetative state. If the patient had not executed a power of attorney for health care, a family seeking to stop treatment would be required to go to court.

The choice about whether to execute one or both of these documents is entirely up to each individual. A person might decide to sign only a living will, and not a power of attorney for health care, perhaps because the person cannot identify an appropriate agent to exercise broad decision-making power. Certainly, the power of attorney for health care is an option that patients should be invited to consider. However, the living will remains a legally effective decision-making tool, and patients who choose to execute a living will alone should not be dissuaded from that choice.



Angelo J. Troisi, FACHE  
Executive Director





*"I have first-hand knowledge of the level of professionalism of Meridian's staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents."*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility, Meridian continues its commitment to develop models of care for the Alzheimer's patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there's our full-time activity directors, social workers, and dietitians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.



## Adjuvant Therapy in Breast Cancer Patients With Negative Lymph Nodes: An Update

In spite of the long held view that patients with no metastases to their axillary lymph nodes (negative nodes) have better prognosis than those with positive nodes, data from the National Surgical Adjuvant Breast/Bowel Project (NSABP) indicate that patients with negative lymph nodes (L.N.) have a 20 percent recurrence rate with a 15 percent death rate in the first five years, and a 40 percent failure rate with a 32 percent death rate at ten years. Such data clearly indicate that these patients constitute a heterogeneous group and that some of them are at high risk for recurrences and metastases. In an attempt to identify the high-risk group among these node-negative patients, data related to age, tumor size, cell differentiation, tumor ploidy, and hormone receptor status were analyzed. None of these factors seemed to affect the survival except for the hormone receptor status. Patients with estrogen receptor (ER) positive tumors had better survival than those who had ER negative tumors. However, the difference was marginal with an 8 percent better disease-free survival rate for the ER positive group. Furthermore, higher ER values failed to enhance the difference.

Based on these data, the NSABP conducted two clinical trials. In Protocol B-13, patients with tumors who had an ER less than 10 fmol/mg protein (ER negative) and who had negative L.N., were randomized after potentially curative surgery to receive no further treatment vs a combination chemotherapy that consisted of high dose methotrexate - 100 mg/m<sup>2</sup> intravenously (I.V.) on days one and eight; 5-fluorouracil (5-FU) - 600 mg/m<sup>2</sup> I.V. on days one and eight; and leucovorin - 10 mg/m<sup>2</sup> every six hours for six doses, as a folate rescue. This program was administered once every twenty-eight days for one year. In Protocol B-14, patients with tumors who had an ER of more than 10 fmol/mg protein (ER positive tumors) and whose L.N. were negative for metastasis were randomized after surgery to receive placebo vs tamoxifen (Nolvadex<sup>®</sup>) - 10 mg orally, twice per day, for five years.

In the November 1988 issue of the *Maryland Medical Journal*, I reported the early results of a short-term follow-up which revealed beneficial effects in both treated groups, i.e., those who received chemotherapy in Protocol B-13, and those who received Nolvadex in Protocol B-14. Such results were noted in the disease-free survival in premenopausal as well as postmenopausal women, and were confirmed by a similar study from the Eastern Cooperative Oncology Group (ECOG Protocol 1180). At the same time, there was no evidence of prolongation of the overall survival. Furthermore, the National Consensus on Breast Cancer highly recommended that all patients who are node-negative should receive adjuvant therapy.

Now, after five years of follow-up, the results of

Protocol B-13 reveal that only premenopausal patients benefited from the chemotherapy and had significantly better disease-free survival ( $P=0.002$ ), although there was no significant difference in the overall survival. Furthermore, there was no significant difference in the disease-free and overall survival in postmenopausal women.

On the other hand, the results of Protocol B-14 showed that there was benefit only in the disease-free survival of those who received tamoxifen, whether they were premenopausal ( $P=0.0001$ ) or postmenopausal ( $P=0.0005$ ). It should be noted that the premenopausal women entered on this study had to have ER positive and progesterone receptor positive tumors. There was no evidence that there was any effect on the overall survival. It seems that there is room for improvement.

Therefore, the NSABP has initiated three studies. The first, Protocol B-19, compares sequential administration of methotrexate + 5-FU + leucovorin vs cyclophosphamide (Cytosan<sup>®</sup>) + methotrexate + 5-FU. Each treatment arm is being carried out for six months. This is to find out which treatment program may yield better results in primary breast cancer patients with negative nodes and ER negative tumors.

The second study, Protocol B-20, is designed to determine the worth of chemotherapy and tamoxifen over tamoxifen alone in patients with primary invasive breast cancer, negative axillary lymph nodes, and estrogen receptor positive tumors. Randomization includes tamoxifen vs methotrexate + 5-FU + leucovorin + tamoxifen vs cyclophosphamide + methotrexate + 5-FU + tamoxifen.

The last study, Protocol B-21, is designed to determine the worth of tamoxifen and radiation in the management of patients with primary invasive carcinoma of the breast, and with negative lymph nodes for metastases who are treated by lumpectomy. Randomization includes radiation therapy alone vs radiation therapy + tamoxifen vs tamoxifen alone. A large number of patients are needed to answer several important questions related to the best treatment in node-negative patients.

The Surgical Oncology Program at the University of Maryland, being an active member of the NSABP, is seeking large patient accrual throughout Maryland and the surrounding states to be treated according to these studies. Patients can be treated in their community, by their own physicians, under the guidelines of the NSABP. I highly recommend that negative lymph node patients be admitted on a controlled study to find the most effective therapy.

At the University of Maryland, call E. George Elias MD at 301-328-5224; at Mercy Hospital Center, call Marvin J. Feldman MD at 301-783-5858; at Harbor



DOCTORS

## There's an easier way to keep your practice



### fiscally fit.

Find out how you can receive prompt payment  
and avoid billing problems by accepting:

- VISA • MASTERCARD • AMERICAN EXPRESS • CARTE BLANCHE • DISCOVER
- DINERS CLUB • TELE-CHEK

#### The Owen Stringfellow Company, Ltd.

MD (301) 560-0393 USA & CANADA 1 (800) 333-6743

A Merchants Transaction Network Inc. Affiliate Nationwide

Hospital Center, call Russell DeLuca MD at 301-347-3386; in the Cumberland area, call John Mehanna MD at 301-724-5112; and in the Hagerstown area, call Frederic Kass MD at 301-733-8600.

**E. GEORGE ELIAS MD, PhD**  
Professor of Surgery & Oncology  
Director, Surgical Oncology Program  
University of Maryland

*Tumor conferences are held weekly on Tuesday between 8 and 9 a.m. in Room S9A06 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathological slides. Call 301-328-5224 by noon Monday to be placed on the schedule: Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD 21201.*

## Professional Employment, Inc.

SPECIALIZING IN RECRUITMENT FOR THE MEDICAL PROFESSION

*Beverly F. Epstein, MPA*

### When you need Experienced, Qualified, Permanent:

- Medical Secretaries • Medical Transcribers
- Receptionists • Medical Assistants
- Billing/Insurance Secretaries • Office Managers

### PROFESSIONAL EMPLOYMENT, INC.

(301) 560-2646

**FEE:** Permanent Placement - a one time fee of  
\$625.00 per placement.

**TERMS:** Permanent Personnel are placed with a one month 'grace' period which is in effect from starting date. If employment is not mutually satisfactory during this time period, additional qualified applicants will be submitted and/or a full credit will be applied only after receipt of payment.

### !!!! ALERT !!!!

New state regulations governing the handling, storage and proper disposal of infectious medical waste has had a direct impact on all health care facilities throughout your state.

#### WASTE SYSTEM ANALYSIS

#### MANIFEST TRACKING SYSTEM

#### STAFF TRAINING AND SUPPORT

#### PROFESSIONAL WASTE REMOVAL

#### ONGOING SUPPORT AND BACKUP

AMERICAN WASTE MANAGEMENT, INC.  
HAS YOUR SOLUTION FOR MEDICAL WASTE!



2300 Essex Street • Baltimore, MD 21224  
(301) 276-7400

## A Clinical Moment With . . . Diabetes

### Label Reading for Health

*Doctor, I am having difficulty understanding package labels in the grocery store. Can you give me some guidance as to how to interpret them in relation to my meal plan?*

A grocery shopping trip can be quite a challenge when one considers the need to interpret food labels. However, basic guidelines for analyzing labels can result in more nutritious food choices, making the effort and time an investment in good health.

The first step is to analyze the ingredients, which are listed in order of concentration from the greatest to the least. Fats, sugars, and salt are ingredients many consumers attempt to control. If these are among the first three listed ingredients, the food may contain amounts which are sufficient to warrant limitation of its use.

Recognizing appropriate fats as ingredients is important. Unsaturated fats do not elevate blood cholesterol levels. Monounsaturated fats are olive oil, canola oil, and nut oils. Polyunsaturated vegetable and seed oils include corn, cottonseed, safflower, sunflower, and soybean. Saturated fats are unacceptable because they tend to raise blood cholesterol levels. These include coconut oil, palm and palm kernel oil, chocolate (cocoa butter), animal or meat fat, butterfat, and hydrogenated fat.

The nutritional portion of the label provides grams and milligrams of various nutrients and calories per serving. Analyzing grams of fat is especially important. Dietary guidelines recommend that calories derived from fat should be 30 percent or less of the total calories. Beware of foods that claim to be mostly "fat-free" by weight (e.g., 97 percent fat-free). These products may not be "low-fat" in terms of the percent of fat calories. Fat calories can be calculated by multiplying the grams of total fat by nine calories. The percentage of fat calories can then be determined by

comparing the fat calories to the total food calories. A rule to remember is that foods will automatically qualify as "low-fat" if there are no more than three grams of fat per 100 calories.

People with diabetes may wish to analyze cereals for sugar content. Cereal products usually have a separate nutritional label section (bottom panel on the side of the box) listing starch, sucrose, other sugars, and fiber. Cereal choices should be limited to those that list no more than five grams in the sucrose and other sugar category.

Many food labels now list sodium as part of the nutritional information. A product may be labeled "low-sodium" if it has 140 mg or less of sodium per serving. The term "very low sodium" indicates 35 mg or less. "Reduced sodium" signifies the food contains 75 percent less sodium than the regular product.

The Food and Drug Administration (FDA) has established basic guidelines for food labeling. However, several legislative measures have recently been introduced to Congress which promote revising the food label format and instituting mandatory nutritional labeling of all foods. Interested consumers may write to the following address to suggest ways to simplify food labels and make them more understandable:

**Food and Drug Administration  
Hearing Clerk, Food Labeling  
7600 Fishers Lane  
Bethesda, MD 20857**

*This question was submitted to LINDA EVERT MS, RD, CDE, Diabetes Nutrition Education, Diabetes Education Program, Suburban Hospital, Bethesda, MD for her review.*

DeWITTE, DeLAWTER MD  
Editor

*Elegant Conservatories  
by Sun Room Company*



OPEN YOUR HOME to the brightness and warmth of the sun by day and to the romance of the moon and stars by night.

OUR CLASSIC OR CONTEMPORARY solarium designs will compliment your style and taste PERFECTLY!

Baltimore, Maryland  
1-800-882-4657



SUN ROOM COMPANY, INC.

## A CLINICAL MOMENT WITH...

Physicians in all specialties are invited to submit synopses of current clinical problems in a question and answer format.

**Write: A Clinical Moment With...**  
*Maryland Medical Journal*  
**1211 Cathedral Street  
Baltimore, MD 21201-5585**





## Let Us Earn Your Business!

R & H Motor Company Offers You:

Valet pick-up and delivery service  
Knowledgeable service people who care  
Over 60 years of Mercedes sales experience  
Oldest Mercedes Benz dealer in Baltimore area

**R&H**   
**MOTOR CARS LTD.**  
**363-3900**

9727 Reisterstown Road  
Owings Mills, Maryland  
2 miles North of Beltway Exit 20

## PROFESSIONAL COMPOUNDING CENTER OF BALTIMORE

DAVID B. LIEBMAN, R.Ph.  
Compounding Pharmacist

6913 Belair Road  
Baltimore, MD 21206

We Make Medicines for Your Patients'  
Special Needs

- 24 hour service
- We mail anywhere
- No cost to the physician



Professional<sup>TM</sup>  
Compounding  
Center of  
Baltimore

Kaye's AID Pharmacy

DOCTOR, WHAT CAN WE MAKE FOR YOU?

Call us today!

(301) 665-5192

(800) 673-8277

## Luxury Homesites

### ABOUT VILLAGER

The Villager name stands for quality built homes and personalized service: use our architects or yours, build on your lot or ours. We can arrange financing, locate a lot for you, and can even sell your old house! So, compare what Villager offers. 8 1/2% fixed rate 25 year construction/permanent financing avail.

### PIKEVILLE

HELMSLEY COURT LOT 18 - Level treed lot, your architect or ours. One of the last available lots in this prestigious neighborhood. Public water, sewer & gas. Ft. Garrison Elementary.

### CAVES VALLEY

HUNTINGTON - Large wooded lot on private drive overlooking new golf course. Excellent investment/superior well yield. Purchase lot or custom build with us.

### HILLSTEAD

KNOLLCREST FARMS LOT 7 - Fully wooded, beautiful 3 acre lot with 6.25 GPM well. Located at Falls Road and the Beltway for close-in easy access. Build in a neighborhood of million dollar homes. EURO/CLASSIC I From \$790K • Others from \$600K.



The EURO/CLASSIC I

**NEW** Lots now also available at  
Huntspring in Ruxton and  
Worthington Park in Owings Mills.

**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

Brokers  
Protected



McDonogh Crossroads • 20 Crossroads Drive, Suite 113  
Owings Mills, MD • Day 363-0963 • Eve 363-1564

---

11425 CRONHILL DRIVE    OWINGS MILLS, MARYLAND    21117    (301) 581-7076

# BALTIMORE B<sup>IO</sup>MEDICAL LABORATORIES

Forty-eight hour turn around time  
for in house testing.



Cytotechnologists have at least  
eight years experience and  
are graduates of an approved  
cytotechnology school.



Continuing educational studies  
required of all technicians.



Experience with over sixty thousand  
GYN cases per year in the  
Baltimore Metropolitan area.

Specializing in Cytology and Histology

---



---

## A Note from Med Chi's President and the Legislative Committee

**W**e are pleased to present once again an issue of the *Maryland Medical Journal* on legislative issues that will affect Medicine and physicians in particular. This issue is also dedicated to Med Chi's goal of providing information to its members on legislative matters. This Legislative Issue and the accompanying Legislative Directory are valuable tools for physicians that will enable them to understand and influence the legislative process.

This year, Mandated Medicare Assignment, Regulation of Physician Fees, No-fault Insurance, Triplicate Prescriptions, and Physician Ownership and Referral are just a few of the many pressing issues facing Med Chi in Annapolis. In order to be justly represented, it is necessary for Maryland physicians to become informed and involved. However, knowledge is not enough; we cannot succeed without competent, experienced legal representation.

Med Chi hopes that the information contained in this issue will bring physicians closer to active involvement in Annapolis -- closer to having their voices heard in the State House.

*Reynaldo L. Lee-Llacer MD*  
President

*Susan R. Guarnieri MD*  
Chairperson  
Legislative Committee

---

# Defending Medicine in Maryland

---

Angelo J. Troisi FACHE, Executive Director

---

As each of us in the medical profession in Maryland contemplates the upcoming session of the Maryland General Assembly, one fact becomes clear: we cannot face the challenges alone. It is for this reason that, in September of 1989, Med Chi's Council entered into a five-year contract with the law firm of Rifkin, Evans and Silver. Through this contract, the firm provides legislative and legal advice on all matters facing the Faculty.

The principles in the firm are The Honorable Edgar P. Silver, Mr. Alan M. Rifkin and Mr. Gerard E. Evans. Among other professional accomplishments, Judge Silver brings to the firm twelve years in Annapolis as chairperson of the powerful transportation committee, where he earned a reputation as a sage and practical problem solver. Mr. Rifkin has had experience as Counsel to the Senate and held the top slot in Governor William Donald Schaefer's legislative team as his Chief Legal Officer. Some of the great successes in tort reform are a result of Mr. Rifkin's undaunted perseverance on the behalf of physicians. The third member of the partnership is Gerard Evans who solidly represented the Faculty for three years prior to his association with the firm. After much success during the 1990 Session, the firm has further strengthened its staff to continue providing superb representation in Annapolis.

During the 1990 Session, the firm successfully represented Med Chi in the consideration of several issues including:

- Mandated Medicare Assignment;
- the institution of a triplicate prescription system;
- the Health Services Cost Review Commission's (HSCRC's) regulation of radiologists, anesthesiologists, and pathologists; and
- physician ownership.

In 1991, Med Chi will face some of these same issues along with many other challenges. (See "The 1991 Maryland General Assembly: What Can We Expect?" on page 27.)

While the state government and legislative experience of Rifkin, Evans and Silver continue to be our best defense in Annapolis, component medical societies from across Maryland have also greatly influenced the level of legislative success Med Chi has enjoyed in the last few years. Through the activities of the local legislative committees and their contributions to Med Chi's Legislative Committee, physicians at the component level have delivered the ideas and support necessary to win on the important issues.

Defending the practice of medicine remains a difficult and complicated endeavor. No longer can one attorney or lobbyist provide all that physicians need to survive the regulatory onslaught. As our success during the 1990 Session demonstrates, the team approach provided by Rifkin, Evans and Silver in concert with our component societies is the best defense that Maryland physicians have to offer. It is our sincere promise that the continuation of this relationship will directly benefit each and every member of the Faculty, and of course, every citizen of Maryland.

---



---

# The 1991 Maryland General Assembly: What Can We Expect?

---

Gerard E. Evans, Esquire and Gregory Don Hall PD, JD, LL.M

---

*Mr. Evans is a partner in and Mr. Hall is a legislative liaison with the law firm of Rifkin, Evans and Silver which represents the Faculty on legal and legislative matters.*

Several legislative initiatives that arose during the 1990 Legislative Session will probably be seen again in the upcoming 1991 General Assembly. This article will address issues likely to resurface as a result of their demise last year, as well as provide our first impressions of new issues that may arise this year.

---

*Numerous issues affecting the practice of Medicine will likely be addressed in the 1991 Maryland General Assembly including Mandated Medicare Assignment, Regulation of Physicians Fees, No-Fault Insurance, Triplicate Prescription, Physician Ownership, Fraudulent Claims, and AIDS.*

---

## Mandated Medicare Assignment

Although Mandated Medicare Assignment was defeated for the fourth consecutive time in last year's Session, Delegate Paul Pinsky (Prince George's County), chief sponsor of last year's bill, will likely reintroduce a similar bill prohibiting physicians from charging Medicare beneficiaries an amount in excess of what Medicare pays. The 1990 bill never reached the House floor because of its defeat in the House Environmental Matters Committee by a vote of 17-6. It is hoped that this year's bill will meet the same fate.

In sum, Mandated Medicare Assignment should not be adopted for the following reasons:

1. Recent federal changes adequately address perceived inadequacies in the Medicare Part B Program.
  - Mandated Medicare Assignment was *clearly rejected* by Congress as a viable alternative to attacking the increase in Part B disbursements.
  - Charges permitted to be billed to Medicare beneficiaries have been changed and will be the lesser of the percentage by which the prior year's Maximum Allowable Actual Charge (MAAC) exceeds the prior year's prevailing rate or the new lower percentage limit.
  - As of September 1, 1990, physicians have been required to submit claims for Medicare beneficiaries whether or not they accept assignments. Claims must be submitted within one year, and no charge can be imposed for processing and submitting such forms. If the physician fails to submit an assigned claim as required, the amount paid shall be reduced by 10 percent.

## New Friends In Annapolis

The 1991 Session of the General Assembly will begin with several new faces. A total of forty-five seats (ten in the Senate and thirty-five in the House of Delegates) will change hands. Three of these seats will be held by Med Chi's newest friends in Annapolis: Delegates Aris T. Allen MD, Rose Mary H. Bonsack MD, and John Hurson. Drs. Allen and Bonsack are members of the Faculty. Mr. Hurson is the husband of Susan Butler Hurson MD, a resident at Washington Hospital Center. The understanding of the medical profession held by each of these distinguished individuals can make them become the Faculty's best new allies in the legislative process.

- Dr. Aris T. Allen is returning to the State House after eight years, having previously served in both the House of Delegates and the Maryland Senate. Dr. Allen practiced medicine with his wife in the City of Annapolis until 1982. His leadership roles in medicine include a term as Vice-president of the Medical and Chirurgical Faculty of Maryland, an appointment to the Board of Medical Examiners, and a period as Director of the Health Standards and Quality Bureau of the Health Care Financing Administration (HCFA).
- Dr. Rose Mary H. Bonsack, a Harford County family practitioner, is serving as an elected public official for the first time. She was born and raised in Harford County, attending Havre de Grace High School, Washington College, and the University of Maryland School of Medicine. Dr. Bonsack graduated from the Medical College of Pennsylvania and was Chief of the Department of Clinics at Kirk Army Hospital in Aberdeen. She is currently serving on the Board of Physician Quality Assurance as Executive Secretary.
- Mr. John Hurson is an attorney in private practice in Bethesda, Maryland. His wife, Dr. Susan Butler Hurson, is a third-year resident at Washington Hospital Center. Mr. Hurson graduated from the Georgetown University School of Law in 1979 and clerked for Judge David Cahoon in Montgomery County. He worked with a law firm handling tax issues before starting his own firm.

- Beginning on January 1, 1992 a resource-based relative value scale (RBRVS) will replace the customary charge-based fee system over a five year phase-in period. RBRVS is expected to increase reimbursement for diagnostic and cognitive services relative to current levels.
  - Medicare Volume Performance Standards (MVPS) have been established for fiscal year 1990 and will be established for subsequent years as well. MVPS will be a target for aggregate Medicare outlays for physician care, calculated by a weighted average increase in reasonable charge amounts, volume increases, and changes in benefits and adjusted by a performance improvement standard.
  - Reimbursement for overvalued procedures will be reduced by one-third of the difference between the prevailing charge for the procedure and the RBRVS value, up to a maximum reduction of 15 percent. A procedure would be considered overvalued if its reimbursement exceeds the RBRVS amount by 10 percent.
  - In determining customary charge levels for physicians' services furnished in 1990 and beyond by "new" physicians -- physicians for whom adequate actual charge data are not yet available -- the customary charge levels shall be set at the start of the record calendar year in the practice at no higher than 85 percent of the prevailing charge levels.
2. The amount of physician services available to Medicare beneficiaries will decrease because physicians will be unable to bear the difference in revenue from a Medicare and a non-Medicare patient. Physicians who continue to treat Medicare patients will be forced to stop performing certain procedures when the level of costs is greater than Medicare's reimbursement.
  3. The quality of services provided to Medicare patients will fall. Physician specialists (such as orthopedists, obstetricians/gynecologists, hematologists, and rheumatologists) will be forced to withdraw from the Medicare market because of their inability to recover costs. The law will create a two-tiered system of care in Maryland, where Medicare patients may receive lower quality care because of their limited access to specialists.

For example, as a direct result of Mandated Medicare Assignment in Massachusetts, approximately 20 percent of the orthopedic surgeons have discontinued their practice. Commenting on the findings, Dennis M. Griffin MD, Massachusetts Orthopedic Association President, said, "the shortage of orthopedic surgeons has been growing more severe each year and the trend is alarming. The lack of availability of an orthopedist has already been felt in emergency situations..." A comparable decrease in Maryland of certain designated specialists (orthopedists, obstetricians/



gynecologists, rheumatologists) could lead to disastrous results in the availability of health care.

### Regulation of Physician Fees

Two legislative initiatives that would have placed significant restrictions on fees charged by physicians were defeated in the 1990 Maryland General Assembly.

House Bill (HB) 1248 introduced by Delegate Connelly (Baltimore County) attempted to include anesthesiologists, radiologists, and pathologists within the definition of "hospital services" offered by all facilities regulated by the Health Services Cost Review Commission (HSCRC). If passed, the specialties involved would have had significant restrictions placed on the fees charged for their services.

HB 1195, introduced by Delegate Taylor (Allegany and Washington Counties), would have required the HSCRC to study and analyze the cost of nonhospital health care services, including physician fees. Although at first glance such a study may seem innocuous, it is likely that the data obtained from such a study would be used to bring physicians' fees under regulation by the HSCRC.

It is probable that similar measures will be initiated in the upcoming 1991 Legislative Session. In fact, the Maryland Chamber of Commerce and the Maryland/DC AFL-CIO have formed the Labor-Management Health Action Committee which purportedly will study "why costs are rising at such a rapid pace." A recent article written by the Chairman of the Maryland Chamber of Commerce noted,

In our new attempt to control costs of health care, we'll have no 'sacred cows.' We'll look at doctors and other providers and how much it costs for them to provide care for Marylanders.

That is a "Get The Doctor" approach. These are the facts:

- National data already available indicate that while physician salaries have risen over the past five to six years, the average total expenses of self-employed physicians have increased from \$78,400 in 1982 to \$140,800 in 1988.
- Total professional expenses increased 13.8 percent between 1987 and 1988 alone.
- Individual physician expenses such as student loan repayments are not factored into the above analysis.
- Overall, the annual after tax income for physicians accounts for only a small part of the health care dollars spent in this country, and for the most part is related to time worked (i.e., physicians working eighty hours earn more than physicians working forty hours).
- Total overall medical care costs for the United States are increasing. This is, however, due to the increased number of patients and overall aging of the population. Sophisticated medical

care is, therefore, provided for longer periods of time to more people.

It is important that physicians educate their respective legislators about the negative implications arising from such a fee-regulating system:

1. Massachusetts, in adopting similar fee control mechanisms, has experienced an exodus of physicians in various specialties (e.g., Obstetrics/Gynecology, Surgery, Radiology) because payments made according to the fee schedule do not provide adequate reimbursement to enable them to practice medicine.
2. Although physician services do contribute to overall health care costs, other factors such as the rising costs of prescription drugs, hospital malpractice insurance, and the practice of defensive medicine are *largely* responsible for the escalating costs associated with health care.
3. Physician fee controls will eliminate competition and stagnate the free marketplace.
4. Fee controls will reduce the incentive to pursue new, more expensive technologies.
5. Physicians' fees pay for, among other things, salaries of their employees. Employee salaries are marketplace driven, and any unilateral, selective controls on this one sector of the economy will render physicians unable to compete for the services of high quality employees. This will further exacerbate the trend away from health care careers and lead to shortages of nurses, all types of technologists, medical secretaries, etc.

### No-Fault Insurance

The Governor's Commission on Insurance is in the process of gathering information about changing Maryland's existing automobile insurance system. The Commission is basically composed of people from the insurance industry with very little input from organized medicine or the general public. Governor Schaefer formed the Commission to examine the options for trimming premium costs for Maryland drivers. (According to a 1987 study, Maryland ranked sixth highest among the states for average premiums paid.)

Under a no-fault system, drivers involved in an accident have their own insurers pay for property damage and any personal injuries, with no provision for filing a lawsuit to win pain and suffering damages. The no-fault system rejects the current jury system. A no-fault system removes benefits from the injured and transfers them to the wrongdoer (tortfeasor).

Although a no-fault system is regarded by its proponents as a panacea to high automobile insurance rates, it should be noted that:

- seven of the top ten premium rates in the country exist in states with no-fault systems, and

- premiums in states that have adopted a no-fault system have risen an average of 40 percent.

Currently, a Med Chi representative is attending the meetings of the Task Force on Automobile Insurance and Medical/Legal Rights to gather information. The Task Force is composed of members from the Maryland State Bar, the Women's Bar, the National Association for the Advancement of Colored People (NAACP), Mothers Against Drunk Drivers (MADD), the American Federation of State, City and Municipal Employees (AFSCME), and the Maryland Trial Lawyers Association. Its purpose is to examine the current automobile insurance system in Maryland and recommend changes, if any, that will improve its operation.

Of concern to Med Chi is not the adoption of a no-fault system, but the attendant fee schedule for

physician reimbursement which often accompanies no-fault legislation.

This issue has been referred to Med Chi's Executive Committee for further discussion and deliberation. This is obviously an important issue that will be followed by Med Chi's lobbyists.

### **Triplicate Prescription**

Senate Bill 658, introduced in the 1990 Session by Senator Lapidus (Baltimore City), originally required prescribers to fill out a triplicate form for each Schedule II drug prescribed. The bill was later amended to include prescription drugs in Schedules III and IV also. The bill was defeated largely due to a cooperative effort by lobbyists for Med Chi (Gerry Evans and Alan Rifkin), the Maryland Pharmacists Association, and the Maryland Hospital Association (MHA), among others. The aforementioned lobbyists were successful in drafting a comprehensive DUR (Drug Utilization Review) Program that more effectively targets and curbs drug diversion than does a triplicate prescription program. The DUR Program, adopted by Governor Schaefer in an Executive Order, establishes a Prescription Drug Commission with various duties, and requires the State Division of Drug Control to analyze prescribing patterns of physician prescribers.

Although last year's bill was defeated, the issue of instituting a triplicate prescription program recently resurfaced at a Governor's Drug Commission meeting where it was heralded by proponents as a cure for Maryland's drug abuse problems. It is likely that legislative bills will be reintroduced to institute the program in Maryland.

The American Medical Association (AMA) has denounced triplicate prescription programs noting:

After ten years of national leadership in the fight against drug abuse, including cooperative efforts with more than thirty-five states, the American Medical Association has been unable to find evidence that use of triplicate prescription programs can effectively address misuse and diversion of prescription medication. Instead, such programs put state governments in the position of usurping or undermining the role of the medical community, including professional associations, scientific and educational institutions, individual physicians and their patients, and the federal Food and Drug Administration (FDA), in determining the appropriateness of medical decisions. In the process, these programs threaten the confidentiality of sensitive patient information, impose unreimbursed clerical burdens on physicians and pharmacists, and add unnecessary expenses to already overburdened state budgets while ignoring existing data bases and tools...

Required use of triplicate forms gives a negative message about needed medications to both physicians and patients. Submission of the forms to state government agencies subjects patients to a loss of privacy not normally encountered in the physician-patient relationship. In addition, because most programs require new prescriptions on a monthly or bimonthly basis, patients suffer the inconvenience and extra expense associated with more physician office visits than their medical conditions may warrant.

### **Background on the Report of the Linowes Commission**

The Commission on State Taxes and Tax Structure is expected to issue its report prior to the beginning of the 1991 Session. The Commission, chaired by R. Robert Linowes, has studied Maryland's State and local tax structure over the past eighteen months, analyzing most of the State's major taxes, including individual and corporate income taxes, sales taxes, and property taxes.

The Commission is closely studying the following:

- the adjustment of individual income tax rates in an effort to make the tax more progressive;
- an expansion of the sales tax to include some services; and
- a restructuring of the property tax system for both the State and local government.

Action on the Commission's recommended changes to the State's taxes will depend on the actions of the Governor and the General Assembly. For example, the Governor may include revenue-raising recommendations in his 1991 legislative program to help ease fiscal constraints on the State budget. The General Assembly, on the other hand, may delay all action on the Commission's recommendations until the 1992 Session so it may study the issues in depth.

In any event, the Linowes Commission's recommendations are likely to call for far-reaching changes to the State's tax structure. The Governor and the General Assembly will need to act quickly to resolve these issues before the end of the ninety-day Session.



The negative impact of triplicate prescription programs on the use of the medications they cover is not denied by proponents of this approach. In fact, they point to overall declines in prescriptions for covered medications as evidence of the success of the programs -- without considering that a mere decrease in overall use does not correlate with a decrease in abuse. In fact, in some areas, interfering with appropriate use of medications, as well as abuse, has become an accepted goal. In one state, a regulator commented approvingly that triplicate programs have a 'chilling effect' on physician prescribing by subjecting such decisions to the scrutiny of state enforcement personnel.

This issue will obviously be an important topic of discussion in the 1991 Session. Its impact on physicians and their prescribing patterns makes it a topic that is not to be taken lightly.

### Physician Ownership and Referral

Three bills were introduced during the 1990 Session regarding physician ownership of health care facilities and referral of patients to such entities.

House Bill (HB) 779 would have prohibited a physician from referring a patient to a bioanalytical laboratory in which the physician had a financial interest. That bill, introduced by Delegate Bill Clark (Harford County), is not expected to make a repeat visit this year.

Two Senate Bills (SB 670 and SB 585) will probably be reintroduced in some form in the upcoming Session.

Senate Bill 670, introduced by Senator Dorman (Prince George's County) and Senator Hollinger (Baltimore County), would have prohibited a physician from referring a patient to a health care service or receiving a referral of a patient from a health care service, if the physician would receive a direct or indirect rebate, refund, commission, unearned discount or profit, or other unearned valuable consideration for the referral.

Senate Bill 585 would have prohibited a health care practitioner from referring a patient to a health care service in which the physician had a financial interest, unless the practitioner disclosed this interest to the patient.

The Faculty supported the passage of SB 585, and will support similar legislation this Session, because it codifies principles established in Faculty ethical opinion 405, *Health Care Facility Ownership By Physicians*:

- .01 It is not inherently unethical for a physician to own or own an interest in a hospital, clinic, or other health care facility. However, the use the physician makes of this ownership or interest may be unethical. For example, sending a patient to such a facility solely for the physician's financial benefit would be unethical.
- .02 When a physician has an interest in or owns a hospital, clinic, or other health care facility to which he sends his patients, he has an affirmative ethical obligation to disclose this fact to this patient.
- .03 Under no circumstances may the physician place his own financial interest above the welfare of his patients. Whatever develops between the physician's financial interest and the physician's allegiance to his patient, the conflict must be resolved in the patient's benefit.

## The Maryland State Budget Shortfall

Before the start of the Middle East crisis in August 1990, the State's Fiscal Year 1991 budget deficit was estimated at \$150 million. As of October 1990, the Department of Fiscal Services had more than doubled the deficit estimate to \$322 million, reflecting the effects of higher oil prices and the national economic slowdown. Simply put, the revenue projections made in December 1989 (those which the current budget was built on) will not be attained. Thus, unless spending is decreased, a budget shortfall will occur.

The Department of Fiscal Services is estimating tax revenues to fall short of projections by:

- \$108 million for the individual income tax;
- \$75 million for the sales tax; and
- \$33 million for the corporate income tax.

Adding to the budget problems are anticipated expenditures of \$77 million more than originally budgeted. Two-thirds of this additional spending is directly tied to health care and welfare benefits for the poor.

The budget shortfall is likely to affect all State agencies, including the Department of Health and Mental Hygiene. The Governor has instituted a freeze on hiring and restricted certain purchases of equipment. Agencies have been asked to develop cost containment methods to reduce expenditures in the current fiscal year, as well as to reduce budget requests for fiscal year 1992. A comprehensive plan should be in effect at the beginning of the 1991 Session.

Forms of this legislation will be tracked closely by the Med Chi lobbying team in the upcoming Session because of the possible ramifications they may impose on physicians.

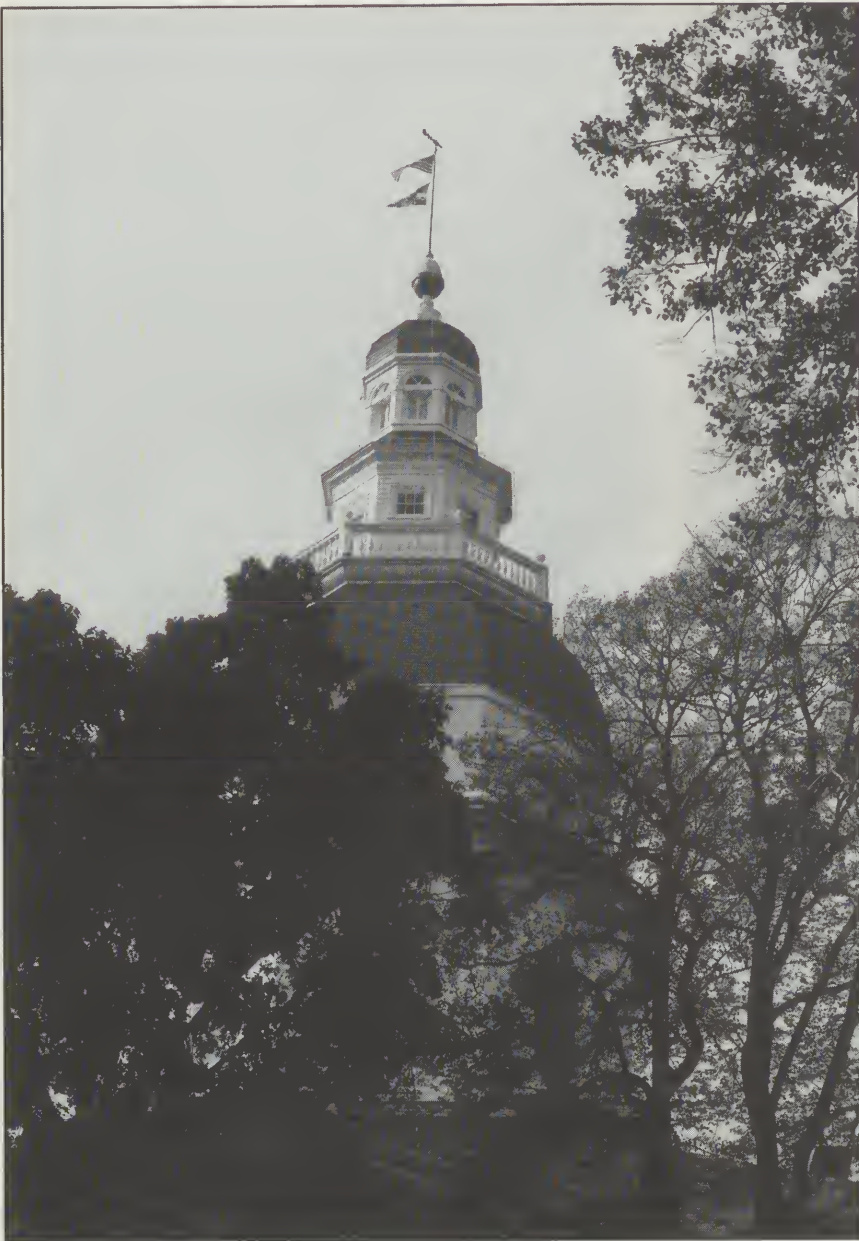
### Fraudulent Claims and Reimbursement

Another bill introduced during the 1990 Session which is expected to return is related to fraudulent claims prevention.

House Bill 346, sponsored by Senator Garrett (Montgomery County), was specifically targeted at health care providers. It was designed to prohibit them from knowingly making fraudulent claims to health care payers.

Med Chi fought the bill for a number of reasons including:

1. The issue of fraudulent claims is sufficiently ad-



The dome of the Maryland State House

addressed in the *Maryland Code Health Occupations Article* which enables the Board of Physician Quality Assurance to revoke, suspend, or reprimand a physician who files a false report or record, or who submits false statements to collect fees for services not rendered.

2. Article 48A, § 233 of the *Maryland Code* provides stiff penalties (\$1000 fine and/or six months imprisonment) against agents, brokers, solicitors, physicians, and others who knowingly or willfully present false or fraudulent claims. This provision negates the need for further legislation.

Perhaps of greater significance than fraudulent

claims is the issue of reimbursement. At a hearing in Annapolis on October 23, 1990, several physicians testified before the House Economic Matters Committee about the difficulties they had experienced in obtaining reimbursement for their services from Blue Cross and Blue Shield and other third-party payers. Horror stories related by several physicians described situations in which reimbursement for services was not completed until six months after billing information was submitted to the third-party payer.

Some possible legislative remedies in this area include:

- a time limit imposed on third-party payers for paying claims;
- the imposition of a standardized billing form for physicians and hospitals to complete when seeking reimbursement; and
- stricter regulations delineating under what circumstances a bill can be rejected or additional documentation required.

#### Acquired Immune Deficiency Syndrome (AIDS)

Several issues from Med Chi's Committee on AIDS have been presented to the Council for discussion and possible legislative action:

*Occupational Exposure of Human Immunodeficiency Virus (HIV):* The Committee on AIDS believes that it is imperative that a health care worker who is exposed to the blood or bodily fluids of a patient in a way which may transmit HIV should know the HIV status of the patient. After such exposure, a health care worker runs the risk of contracting HIV and transmitting

this disease to his/her sexual partners or to an unborn fetus. The behavior of the exposed health care worker is dependent on knowing the HIV status of the patient who was the source of the exposure. HIV may be prevented if AZT is immediately administered after high risk blood exposure. Additionally, individuals who have been exposed to HIV infection require frequent, ongoing tests to determine if they are infected. No one should be subjected to this uncertainty and inconvenience because of inadequate information regarding the status of the HIV exposure. A delay in testing or a refusal by a patient to be tested prevents effective treatment of the exposed individual and in-



creases the risk of the exposed health care worker and others with whom he or she may have intimate contact.

The Committee on AIDS proposes the development of legislation that would insure immediate testing of individuals who serve as the source of a significant exposure to health care workers.

*Current Consent Form for HIV Testing:* At the October meeting, committee members also discussed the Department of Health and Mental Hygiene's (DHMH's) revision of the current consent form for HIV testing which will soon be published in the *Maryland Register*. Although the committee members agreed that the form is a hurdle in the testing of patients, the consensus was that it is necessary due to liability issues. After publication, DHMH will have another comment period at which time Med Chi can once again offer suggestions for simplifying the testing process. Committee members have also recommended that a brochure or a video be created to take the place of pretest counseling.

Although modifying the consent form for HIV testing involves a regulatory vs a statutory change, it is evident that the Committee on AIDS, the Legislative Committee, and Council will spend many hours debating and considering these and other AIDS-related issues during the upcoming Session.

### Conclusion

These are a few of the issues that are expected to be addressed in the upcoming 1991 Maryland General Assembly. It is a foregone conclusion that many other bills affecting physicians and their practices will be introduced. Med Chi's lobbyists, the Legislative Committee, and Council will be asked to respond to those issues with insight, knowledge, and speed when they are presented in Annapolis. Physicians should remember that lobbying is essential to the lawmaking process, but grassroots campaigns begin in physicians' offices where legislators and the voting public are treated. ■



Beautifully executed woodwork enhances the interior of the Maryland State House in Annapolis.

Rifkins, Evans & Silver is pleased to announce that *Stephen Buckingham, Esquire* has become associated with the firm and will provide on-site legal and government relations services to Med Chi and its members. He replaces Gregory Don Hall PD, JD, LLM, who has left to explore other professional opportunities. Before joining the firm, Mr. Buckingham was an administrator with the Maryland Department of Health and Mental Hygiene where he was responsible for regulating health care providers. He subsequently entered private practice, providing assistance to individuals and organizations in health care and general law matters. Mr. Buckingham is available in the Med Chi office to answer your questions. He can be reached at 301-539-0872/1-800-492-1056.

# Continuing...

For over fifteen years, the Med Chi Agency has been serving the needs of Maryland physicians...*your* needs, with unrivaled commitment and dedication. And as the Agency has grown, so has your trust...in us, in our products and in the way we do business with you.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial options. Among these are:



Professional Liability  
Insurance (Malpractice)



Personal insurance, including  
homeowners, auto, boat and  
recreational vehicle coverage  
and personal umbrella  
insurance.



Office insurance, including  
medical equipment, medical  
records, computer equipment,  
account receivables, workers  
compensation, business auto  
and employee dishonesty



Financial and estate planning,  
specifically tailored to the  
medical professional.



Individual and group, life,  
health and income protection.



Qualified and non-qualified  
Retirement Planning

## ...A Commitment To Service



**THE MED CHI AGENCY**  
1204 Maryland Avenue  
Baltimore, Md. 21201-5583  
(301) 539-6642  
1-800-543-1262 (in Maryland)  
FAX (301) 752-5421





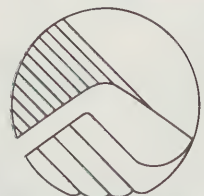
# Confidential

Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians with a confidential and nondisciplinary focus.

Addiction.....Marital/Family Conflicts.....Psychiatric Illness.....Organic Impairment.....Physical Handicap.....If these problems exist, we can help find the solutions. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families. The Committee is **NONDISCIPLINARY** and information is kept **CONFIDENTIAL**. If you, a colleague, or family member is in need of our services call:  
**(301) 539-0872**  
in Maryland **1-800-492-1056**  
Message line **(301) 727-0120** (24 hours a day, 7 days a week) Leave a message.

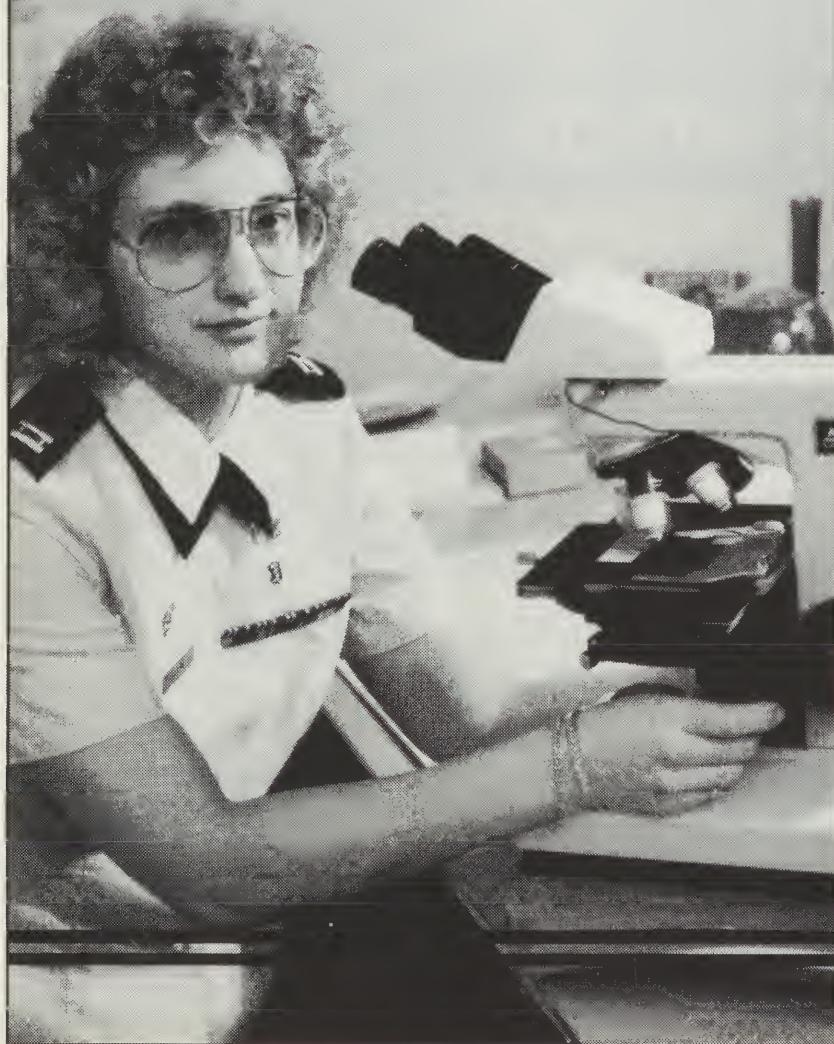
Medical  
and Chirurgical Faculty  
of Maryland



**Physician  
Rehabilitation  
Committee**

*HELPING IS OUR BUSINESS...If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation  
1211 Cathedral Street, Baltimore, Maryland 21201  
Please note on your donation: "Physician Rehab"*

# AIM HIGH



## BE AN AIR FORCE PHYSICIAN.

Become the dedicated physician you want to be while serving your country in today's Air Force. Discover the tremendous benefits of Air Force medicine. Talk to an Air Force medical program manager about the quality lifestyle, quality benefits and 30 days of vacation with pay per year that are part of a medical career with the Air Force. And enjoy the satisfaction of a general practice without the financial and management burden. Today's Air Force offers an exciting medical environment and a non-contributing retirement plan for physicians who qualify. Learn more about becoming an Air Force physician. Call

**USAF HEALTH  
PROFESSIONS  
COLLECT  
(301)981-7897**





---

# Protecting The Disabled From Discrimination

---

Stephen C. Buckingham, Esq.

---

*Mr. Buckingham is an attorney with the firm of Rifkin, Evans and Silver, legal counsel for Med Chi.*

---

*As a result of the recently enacted Americans with Disabilities Act of 1990 (ADA), physicians would be wise to examine their practices to assure that there are no actions taken with discriminatory intent.*

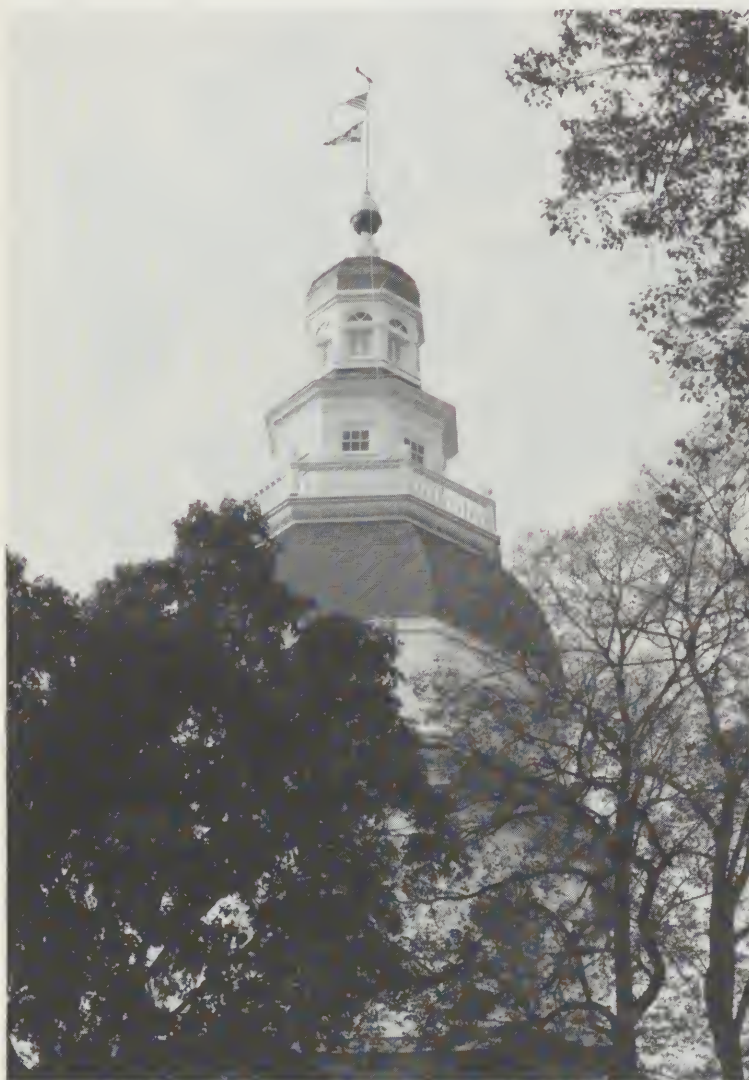
---

A physician or health care provider accused of discriminating against someone on the basis of race, religion, sex, or handicap, is likely to plead not guilty to the charges. Most people know that a white may not refuse to sell his house to a person because the buyer is black, that men should not be hired or promoted over women simply because they are men, and that wheelchair ramps should be provided to assure that the disabled can enter and leave public buildings. However, this level of consciousness about discrimination may not be enough to satisfy recent laws on the subject. Physicians and other health care providers may be required to take active steps, to *do* something, instead of merely remembering *not* to do something.

The most recent federal enactment in this area is the Americans with Disabilities Act (ADA),<sup>1</sup> passed by Congress in 1990 and becoming effective in stages beginning in 1992. The ADA prohibits discrimination against persons with disabilities in employment and public accommodations. This simple sounding Act carries with it consequences that are far from simple, consequences that will require a fundamental change in how professionals think about and conduct their daily lives. Almost every employer, person, or group that provides services to the public will have to take active steps to accommodate the needs of disabled individuals.

## Development of Anti-Discrimination Law

The ADA must be viewed in the context of the myriad of anti-discrimination laws that have preceded it. Beginning with the enactment of the Civil Rights Act of 1964,<sup>2</sup> laws aimed at addressing racial, ethnic and religious discrimination have been adopted at the federal level, followed later by state statutes and even some local ordinances. Administrative agencies have been established at all three levels to investigate, prosecute, and decide cases of discrimination. Although originally intended to protect individuals from discrimination in federally-assisted programs and employment on the basis of "race, color, or national origin,"<sup>3</sup> later



The historic Maryland State House remains the focus of Annapolis atop its hill overlooking the Severn River.

steer prospective home buyers away from neighborhoods of a different race, color, religion, sex, or national origin or to refuse to sell, rent, or finance sales for such reasons.<sup>8</sup> This law strengthened the efforts begun earlier to break down the legal barriers of segregated communities. As early as 1948, the United States Supreme Court had refused to enforce a neighborhood's restrictive covenant against blacks, saying that government could not be used to uphold an unconstitutional deprivation of civil rights.<sup>9</sup>

In 1973, Congress passed the Rehabilitation Act,<sup>10</sup> making it illegal for the first time to discriminate against a person on the basis of a physical or mental handicap. As with the Age Discrimination Act, this law only applied to those receiving federal funds. However, since the vast majority of health care providers receive Medicare or Medicaid reimbursement for care, its provisions were felt throughout the health care system. Amendments to the Fair Housing Act effective in 1989<sup>11</sup> broadened its protections to disabled individuals as well. It is now illegal to erect barriers (including zoning laws) that keep physically or mentally disabled people from living in any community they choose.

In 1963, Maryland enacted its first anti-discrimination law<sup>12</sup> and established the Commission on Human Relations to enforce it. Under Article 49B of the *Annotated Code of Maryland* it is now illegal to discriminate against a person in employment, housing, or public accommodation on the basis of "race, creed, sex, age, color, national origin, marital status, or physical or mental handicap."<sup>13</sup> In this regard, Maryland has similar but broader protections than those at the federal level. Local jurisdictions have also adopted anti-discrimination laws, some of which are broader than State law, or have been interpreted by local Human Relations Commissions

as being broader.

### Enforcement

On the federal level, the Equal Employment Opportunity Commission (EEOC) handles employment discrimination complaints and the Justice Department handles cases that occur in public accommodations. The Department of Housing and Urban Development handles housing complaints.<sup>14</sup> Where there is a state mechanism in place, complaints of federal law may also be handled by the state agency.<sup>15</sup> In Maryland, the Human Relations Commission (HRC) is empowered to receive complaints involving housing, employment, and public accommodations, to investigate the charges, and to determine if there is probable cause to believe that a discriminatory act has occurred. If probable cause is found, the HRC attempts to resolve the matter through conference and conciliation. If an

amendments to federal labor laws made sexual and religious discrimination illegal in employment as well.<sup>4</sup>

Other federal laws address discrimination against other groups. The Age Discrimination in Employment Act of 1967<sup>5</sup> aimed at protecting the elderly from discrimination in hiring, promotion, and wages, while the Age Discrimination Act of 1975<sup>6</sup> prohibited age discrimination by recipients of federal funds. Currently, a health care provider in the Medicare or Medicaid program may not refuse to care for a person because that person is above or below a certain age. (While this would appear to prevent a provider, such as a nursing home, from refusing to admit a child under a certain age, the facility could legally justify its action if there were *documented medical reasons* for refusing a particular young patient.)

The passage by Congress of the Fair Housing Act in 1968<sup>7</sup> signaled the spread of legal protections into the housing market. Since that time it has been illegal to



agreement to settle cannot be reached, the HRC conducts a formal hearing and, if discrimination is determined to have occurred, may issue orders to cease discriminatory acts and may award compensation to victims.<sup>16</sup>

Where local jurisdictions have adopted anti-discrimination laws, local human relations or human rights commissions may also be established. The powers and duties of these commissions are similar to those of the State HRC, but they may be applying broader local laws or may interpret similar laws in a broader manner. Baltimore City has its own, as do the following counties and municipalities:

Anne Arundel County	Annapolis
Baltimore County	Cumberland
Calvert County	Potomac
Frederick County	Rockville
Harford County	
Howard County	
Montgomery County	
Prince George's County	
St. Mary's County	

Decisions of the State or a local commission may be appealed to the county circuit court, although reversal of a commission decision is rare. So much deference is paid to the factual findings of an administrative agency (even one like the HRC that is charged with rooting out discrimination), that a court will not substitute its judgment for that of the agency in factual matters. Even if the overwhelming weight of evidence supports a contrary finding, the court will not overturn an agency's factual finding as long as there is *any* evidence to support the agency's decision.<sup>17</sup> This gives the State and local commissions significant power in enforcing anti-discrimination laws.

### Recent Trends

Since the 1964 Civil Rights Act was passed by Congress, the overall trend has been toward increasing legal protections from discrimination. All levels of government have become involved, resulting in increased enforcement. Rather than attempt to preempt the field with its legislation, the federal government has encouraged state and local governments to enact protections that go beyond its laws.

Protections have been extended from racial, ethnic, and religious groups to groups defined by sex, age, and physical or mental disability. On the State level, even marital status is no longer a valid criteria for treating someone differently.<sup>18</sup> Even the definition of handicapped has changed to encompass persons with mental or emotional illness and to include individuals diagnosed with AIDS or as HIV positive.<sup>19</sup>

Anti-discrimination laws have also been applied in



A forest of masts and spars crowd the harbor at Annapolis.

various aspects of life. Employment, housing, and public accommodations are now all subject to legal scrutiny. Local governments have even gone further than the State. While Maryland law specifically defines a public accommodation to mean a place that provides food, drink, lodging, or entertainment,<sup>20</sup> the Howard County Human Rights Commission recently interpreted its local public accommodation ordinance to apply beyond physical establishments to anyone who provides or offers goods or services to the public.<sup>21</sup>

### Americans with Disabilities Act

As broad as the present anti-discrimination laws are, the ADA goes even further. Unlike the Rehabilitation Act of 1973 which only applied to recipients of federal funds, the ADA applies to anyone who employs twenty-five or more people as of July 26, 1992 and fifteen or more people after July 26, 1994.<sup>22</sup> An employer is

prohibited from discriminating against a qualified individual with a disability with regard to job application procedures, hiring, discharge, compensation, advancement, job training, and any other "terms, conditions, and privileges of employment."<sup>23</sup> Enforcement will be handled through the EEOC or the Maryland Human Relations Commission.<sup>24</sup>

Beginning January 26, 1992, the Act also applies to any private entity that owns, leases, or operates a place of public accommodation. A "public accommodation" is broadly defined to include almost any business that provides or offers to provide goods or services to the public, specifically mentioning a "professional office of a health care provider, hospital, or other service establishment."<sup>25</sup> A business may not deny a disabled individual the right to participate in, or benefit from its goods, services, facilities, privileges, advantages, or accommodations. Further, the business may not provide disabled persons with goods, services, or facilities that are separate or different from those provided non-disabled persons, unless it is necessary to ensure that the goods, services, and facilities are as effective for the disabled as for others.<sup>26</sup> The Justice Department will enforce these provisions, but private lawsuits will also be allowed.<sup>27</sup>

The impact of the ADA is also greater than its predecessors. Not only must an employer or public accommodation assure that it avoids actions with discriminatory intent, but it must also make "reasonable accommodations" for individuals with disabilities.<sup>28</sup> This means that an employer or service provider must actively attempt to overcome barriers that confront the disabled. Whether the employer or provider must implement a particular "accommodation" will depend on whether it imposes an "undue hardship" to do so.<sup>29</sup> Although the goal of the ADA is full and equal access for the disabled, the Act itself makes some exceptions in compliance, such as the requirements for elevators.<sup>30</sup> Undoubtedly, the EEOC and Justice Department will provide further guidance in the regulations they are required to propose and adopt in the near future.<sup>31</sup>

### Preparing for Compliance

The fact that the term "disabled" encompasses a variety of medical and psychological conditions is expected to make compliance with the Act more difficult. Yet the Act challenges employers and service providers to consider the disabled in daily operations and to make accommodations for them. Although there is presently little guidance in how far it will be necessary to go to overcome the burdens of the disabled, a health care provider would be wise to begin preparing now for the law's implementation.

The first action a physician should take is to reexamine his or her practice to assure that there are no actions taken with discriminatory intent. Next, the physician should attempt to identify all of the various types of disabling conditions likely to be encountered

in daily practice. For each type of disability, the physician should determine if there are any barriers that make access to services more difficult for a disabled person seeking care. Means of overcoming each of these barriers should then be sought, and the costs associated with these solutions should be determined. With this information, the physician will need to decide which accommodations should be implemented and which would pose an undue burden for financial or other reasons.

Throughout this process, the physician should document his or her actions. The more a physician can demonstrate that serious thought and planning went into decisions, the less likely it is that he or she will be vulnerable to charges of discrimination. While only time and experience (and court decisions) will confirm how far health care providers will have to go to comply with the new law, physicians should not wait for events to overtake them, but should take steps now to anticipate the law's effect. If ever called on to justify actions, the best defense is documentation that serious and thoughtful planning has been done.

### References

1. Act July 26, 1990, P.L. 101-336, codified at 42 U.S.C. §§ 12101.
2. 42 U.S.C. §§ 2000a.
3. 42 U.S.C. § 2000d.
4. 42 U.S.C. § 2000e.
5. 29 U.S.C. § 621.
6. 42 U.S.C. §§ 6101.
7. 42 U.S.C. §§ 3601.
8. Sexual discrimination was first prohibited in 1974, See 42 U.S.C. § 3604.
9. *Shelby v Kraemer*, 334 U.S. 1, 685 S.Ct. 836, 92 L.Ed. 1161 (1948).
10. 29 U.S.C. §§ 701.
11. P.L. 100-430, passed September 13, 1988, codified at 42 U.S.C. § 3604(f).
12. Chapter 227, *Laws of Maryland* (1963).
13. Article 49B, § 5.
14. Civil Rights Act: 42 U.S.C. §§ 2000a-3; Age Discrimination in Employment Act: 29 U.S.C. § 625; Fair Housing Act: 42 U.S.C. § 3610(a).
15. Civil Rights Act: 42 U.S.C. §§ 2000a-3(c); Fair Housing Act: 42 U.S.C. § 3610(d).
16. Art. 49B, §§ 9 - 11.
17. *St. Leonard Shores Joint Venture v Supervisor of Assessments of Calvert County*, 307 Md. 441, 514 A.2d 1215 (1986); *Baltimore City Police Department v Cason*, 34 Md. App 487, 368 A.2d 1067 (1977).
18. Art. 49B, § 5.
19. Code of Maryland Regulations (COMAR) 14.03.02.02 (1988); Rehabilitation Act of 1973, 29 U.S.C. § 706(8).
20. Art. 49B, § 5(c), *Annotated Code of Maryland*.
21. HRC Case No. 90-001-002, decided October 4, 1990.
22. 42 U.S.C. § 12111(5).
23. 42 U.S.C. § 12112(a).
24. 42 U.S.C. § 12117.
25. 42 U.S.C. §§ 12182 and 12181(7)(f).
26. 42 U.S.C. § 12182(b).
27. 42 U.S.C. § 12188.
28. 42 U.S.C. § 12111(a).
29. 42 U.S.C. § 12111(10).
30. 42 U.S.C. § 12183(b).
31. Due by July 26, 1991 for public accommodations (42 U.S.C. § 12186) and by January 26, 1992 for employment provisions. (42 U.S.C. § 12116).



# Where there's smoke...there may be bronchitis



"Recent research has delineated early, more subtle changes in lung and immune functions. These alterations directly predispose smokers to respiratory tract infection."

Am Fam Phys 1987;36:133-140

**Cecilor<sup>®</sup>**  
Pivules<sup>™</sup>  
250 mg  
**cefactor**

**Established therapy  
for today's patients**

For respiratory tract infections due to  
susceptible strains of indicated organisms

#### **Brief Summary.**

Consult the package literature for prescribing information.  
**Indication:** Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A  $\beta$ -hemolytic streptococci).

**Contraindication:** Known allergy to cephalosporins.  
**Warnings:** CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

#### **Precautions:**

- Discontinue Cefclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Cefclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Cefclor penetrates mother's milk. Exercise caution in prescribing for these patients.

#### **Adverse Reactions:** (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Cefclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Cefclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization—two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea); 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertension, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

**Abnormalities in laboratory results of uncertain etiology.**

- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Cefclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistix<sup>®</sup> tablets but not with Tes-Tape<sup>®</sup> (glucose enzymatic test strip, Lilly).

PA 0791 ANP (02/14/90/LM)  
Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

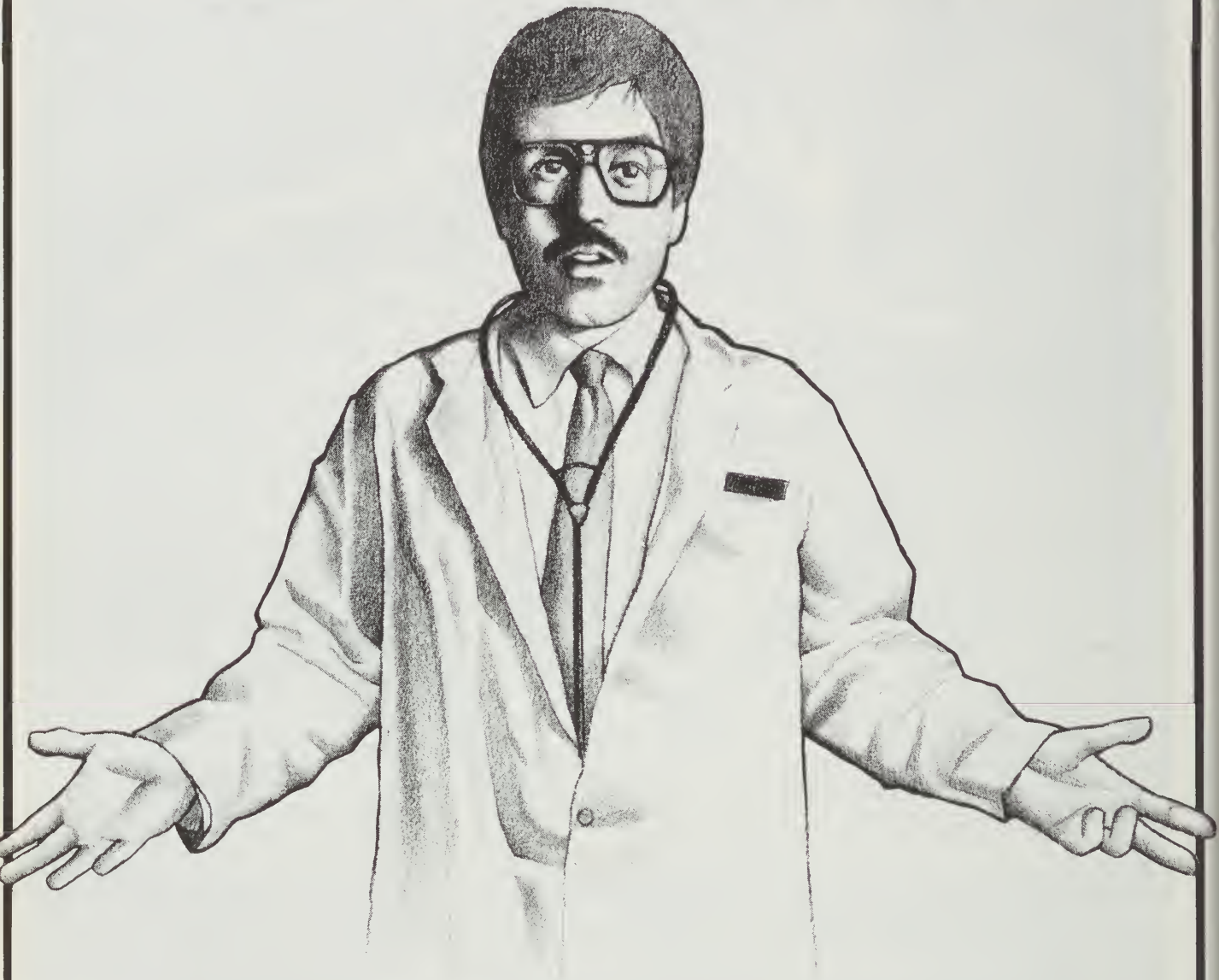
**Lilly**

Eli Lilly Industries, Inc.  
Carolina, Puerto Rico 00630  
A Subsidiary of Eli Lilly and Company  
Indianapolis, Indiana 46285

CR-0525-B-04/833 ©1990, ELI LILLY AND COMPANY



# HOW ABOUT IT?



Is it fair that only some Maryland physicians support the political activity  
that benefits all physicians?

**JOIN THE CAUSE!    GET INVOLVED!    GET POLITICAL!**

Join Maryland Medical Political Action Committee

Send your \$100 check to:  
Harold Bob, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201

Contributions to AMPAC and State PAC are not deductible as charitable contributions for Federal income tax purposes.



# The Medical and Chirurgical Faculty of Maryland

## 1991 Maryland State Legislative Directory

---



### Table of Contents

The Legislative Process . . . . .	II
Consideration of Bills . . . . .	II
The Progress of a Bill . . . . .	III
Dates of Interest . . . . .	IV
Important Telephone Numbers . . . . .	IV
Maryland Legislators with Addresses and Telephone Numbers . . . . .	V

---

#### President

Reynaldo L. Lee-Llacer MD

#### Chairperson, Legislative Committee

Susan R. Guarnieri MD

#### Executive Committee

Reynaldo L. Lee-Llacer MD, *President*

J. David Nagel MD, *President-elect*

Harold B. Bob MD, *Secretary*

Jose M. Yosuco MD, *Treasurer*

Marvin Schneider MD, *Council Chairperson*

Gary L. Rosenberg MD, *Council Vice-chairperson*

Raymond M. Atkins MD, *Immediate Past President*

#### Executive Director

Angelo J. Troisi FACHE

#### Counsel to the Faculty

Rifkins, Evans and Silver

575 South Charles Street, Suite 200

Baltimore, Maryland 21201

301-837-9700 or 1-800-673-8565

Gerard E. Evans, Esquire

---

## The Legislative Process \*

---

### From Hopper to Enactment

The drafting of legislation requires the skill of experienced and trained personnel. This service is rendered by the Department of Legislative Reference. A bill or joint resolution may be introduced in advance of regular sessions and is styled a "prefiled bill." A bill is filed ("is dropped into the hopper") with the Secretary of the Senate or the Clerk of the House, is given a number, and is readied for its first reading on the floor. Bills may be introduced in either chamber until the last thirty-five days of the session. After that, bills may be introduced only with the consent of two-thirds of the membership.

**First Reading** The Reading Clerk, when the session has convened, reads the title and the presiding officer assigns the bill to the appropriate committee.

**Reference to Committee** The committees meet daily during the session to receive testimony and take action on bills assigned. Citizens are encouraged to present their views on the subject matter by mail or by personal appearance. Legislative agents (lobbyists), representing organized interest groups, speak at these hearings, either to oppose or support the proposed legislation. The Department of Fiscal Services prepares a fiscal analysis for each bill and these fiscal notes are considered during the committee deliberations.

Unfavorable committee action, which may mean legislative "death," frequently requires as much, or more, committee discussion and time as favorable committee action, which sends the bill to the floor for second reading and floor consideration.

**Second Reading and Floor Consideration** The bill is reported to the floor by the committee (favorably, unfavorably, or without recommendation, and with or without committee amendment). It is open to amendment from the floor, and the ultimate form of the bill must be determined on second reading. Committee action may be reversed but this is infrequent.

**Third Reading** The bill must be printed for third reading with all amendments included in this final version. No amendments may be presented on third reading in the chamber of its origin, and the bill must be passed by a majority of the elected membership.

**Second Chamber** The procedure follows a pattern identical with that of the chamber in which the bill originated, except amendments may be proposed during third reading as well as second reading. If not amended in the second chamber, final passage may occur without reprinting.

\*Information provided by the State of Maryland Department of Legislative Reference, F. Carvel Payne, Director.

---

## Consideration of Bills

---

### Consideration of Bills Originating in One Chamber and Amended in Second Chamber

If amended in the second chamber, the bill is returned to the chamber of origin where a vote is taken on a motion to concur or reject the amendments. If concurrence is voted, the bill itself is voted on as amended and action is complete. The bill is reprinted, or enrolled, to include the added amendments before submitting it to the Governor.

If the amendments are rejected, two courses of action are possible: 1) the amending chamber may be requested to withdraw its amendments, or 2) upon refusal of withdrawal of amendments, either chamber may request a conference committee to resolve the differences between the two chambers.

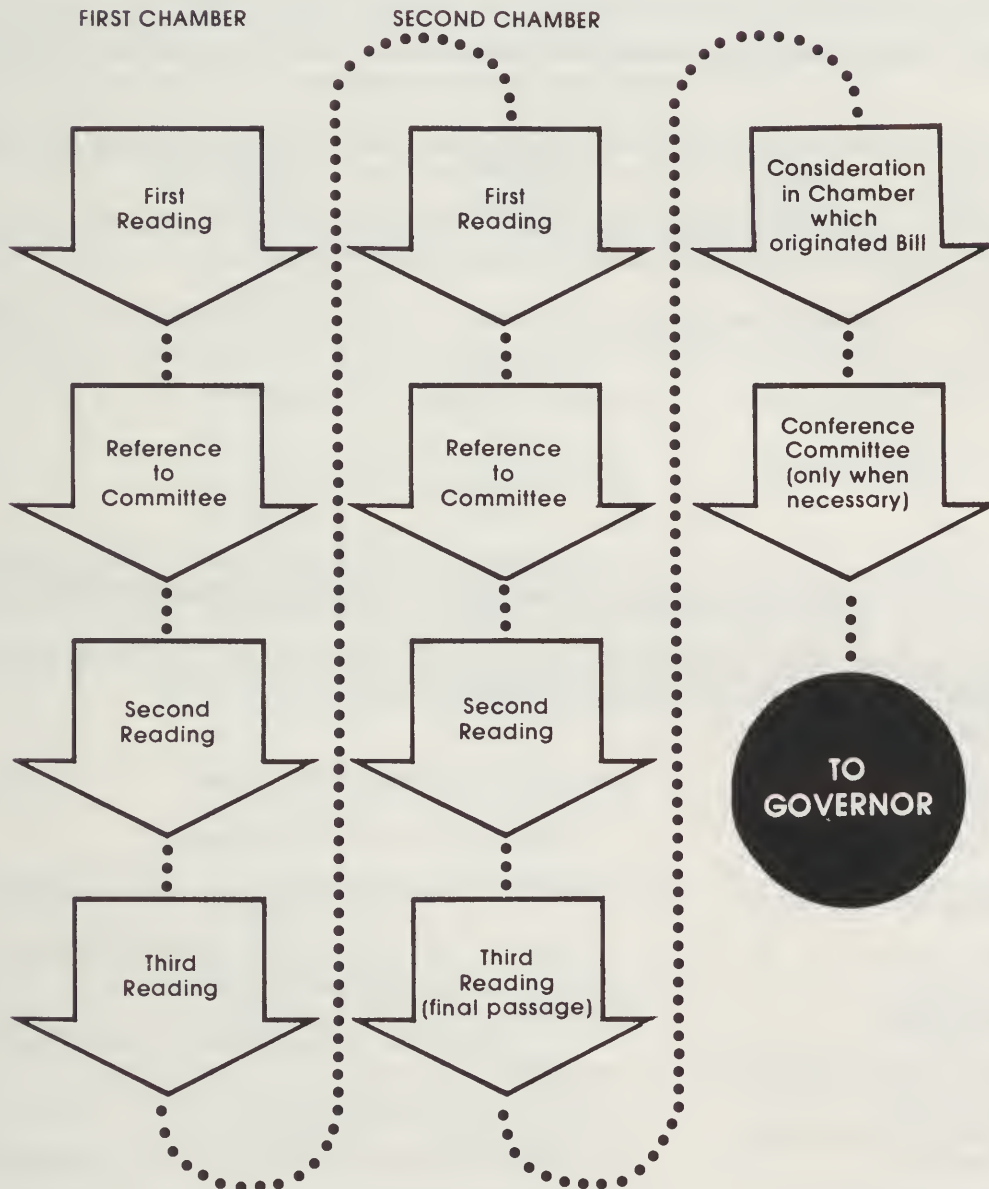
**Conference Committee** A report of a conference committee goes back to both chambers to be adopted or rejected without amendment. If the conference committee report is adopted, the bill is voted upon for final passage in each house. If the conference committee report is rejected by either house, the bill fails.

**Presentation of Bills to the Governor** Presentation of all bills, except the budget bill and constitutional amendments, to the Governor is mandatory. The budget bill becomes law upon its final passage and cannot be vetoed. Bills must be presented to the Governor within twenty days following adjournment of a session, and in the case of such bills, the Governor may veto within thirty days after presentation to him. If he does not veto a bill it becomes a law. He may not veto a constitutional amendment.

**The Power to Override a Veto** rests with the Legislature. If a bill is vetoed during a regular session, the veto message is considered immediately. If a bill presented after the session is vetoed, the veto message must be considered immediately at the next regular or special session of the Legislature, except that the Legislature during the first year of a new term may not override a veto. A three-fifths vote of the elected membership in each chamber is necessary to override a veto.



## The Progress of a Bill



---

## The 1991 Maryland General Assembly - Dates of Interest

---

January 9	Session convenes.
January 16	Budget must be submitted by Governor prior to this date.
January 22	Senate Bill and House Bill request guarantee date. (All bills filed by this date <i>must</i> be considered by committee.)
February 1	Senate Bill and House Bill introduction date. (Senate Bills introduced after this date are referred to the Senate Rules Committee.)
February 22	House Bills introduced after this date are referred to the House Rules Committee. (They are not guaranteed to have public committee hearings.)
March 19	Committee reporting courtesy date. Committees in each chamber should report out those bills they intend to pass favorably by this date.
March 25	Opposite chamber bill crossover date. The first chamber should pass those bills requiring consideration by the opposite chamber by this date.
April 1	Budget bill to be passed by both chambers by this date.
April 8	Adjournment.

---

## The 1991 Maryland General Assembly - Important Telephone Numbers

---

Use the 841 exchange when calling from the Baltimore area and the 858 exchange when calling from the Washington area. Outside the Baltimore/Washington area, dial 1-800-492-7122.

Legislative Information & Library:	ext. 3810	House Majority Leader:	ext. 3534
Information Desk, State House:	ext. 3886	House Minority Leader:	ext. 3401
Office of the President of the Senate:	ext. 3700	House Committee on Appropriations:	ext. 3407
Senate Majority Leader:	ext. 3697	House Committee on Constitutional and Administrative Law:	ext. 3502
Senate Minority Leader:	ext. 3568	House Committee on Economic Matters:	ext. 3519
Senate Budget & Taxation Committee:	ext. 3690	House Judiciary Committee:	ext. 3488
Senate Economic & Environmental Affairs Committee:	ext. 3661	House Committee on Ways and Means:	ext. 3469
Senate Finance Committee:	ext. 3677	Bill Room (copies of bills, amendments, and fiscal notes):	ext. 3840
Senate Judicial Proceedings Committee:	ext. 3623		
Office of the Speaker of the House of Delegates:	ext. 3800		



## Maryland Legislative Members with Addresses and Telephone Numbers Listed Alphabetically by County/City

**Use the 841 exchange when calling from the Baltimore area and the 858 exchange when calling from the Washington area. Outside the Baltimore/Washington area, call 1-800-492-7122, ext. 3810.**

Legislator	Session Address	District Address	Legis. District	County/City	Years in Legis.
Sen. John J. Hafer	Senate Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	1	Allegany, Garrett Counties	
Del. George C. Edwards	House Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 8 Grantsville 21536 895-5720	1	Allegany, Garrett Counties	8
Del. Kevin Kelly	House Office Bldg. Annapolis 21401 ext. 3810	201 Washington St. Cumberland 21502 777-9000	1	Allegany County	4
Del. Betty Workman	House Office Bldg. Annapolis 21401 ext. 3810	65 LaVale Court LaVale 21502 729-2041	1	Allegany County	4
Sen. Donald F. Munson	Senate Office Bldg. Annapolis 21401 ext. 3810	28 West Church St. Hagerstown 21740 791-4511	2	Allegany, Washington Counties	16
Del. Peter G. Callas	House Office Bldg. Annapolis 21401 ext. 3810	35 Day View Drive Hagerstown 21740 739-0212	2	Washington County	8
Del. John P. Donoghue	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	2	Washington County	
Del. Casper R. Taylor	House Office Bldg. Annapolis 21401 ext. 3810	316 Prince George's St. Cumberland 21502 724-9234	2	Allegany, Washington Counties	16
Sen. Gerald W. Winegrad	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	30	Anne Arundel County	8
Del. Aris T. Allen	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	30	Anne Arundel County	11 non-continuous
Del. John C. Astle	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	30	Anne Arundel County	8
Del. Michael E. Busch	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	30	Anne Arundel County	4

Legislator	Session Address	District Address	Legis. District	County/ City	Years in Legis.
Sen. Philip C. Jimeno	Senate Office Bldg. Annapolis 21401 ext. 3810	5915 Manor House Ln. Brooklyn Park 21225 636-4134	31	Anne Arundel County	10
Del. Joan D. Cadden	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	31	Anne Arundel County	
Del. W. Ray Huff	House Office Bldg. Annapolis 21401 ext. 3810	8349 Ritchie Hwy. Pasadena 21122 647-1111	31	Anne Arundel County	4
Del. Charles W. Kolodziejski	House Office Bldg. Annapolis 21401 ext. 3810	168 Carvel Beach Rd. Baltimore 21226 255-5188	31	Anne Arundel County	7
Sen. Michael J. Wagner	Senate Office Bldg. Annapolis 21401 ext. 3810	Arundel Ctr. North, Rm. 510 101 Crain Hwy., N.W. Glen Burnie 21061 760-6453	32	Anne Arundel County	10
Del. Tyras S. Athey	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	32	Anne Arundel County	23
Del. Patrick C. Scannello	House Office Bldg. Annapolis 21401 ext. 3810	114 Vernon Avenue Glen Burnie 21061 768-5678	32	Anne Arundel County	12
Del. Victor A. Sulin	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	32	Anne Arundel County	
Sen. John A. Cade	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	33	Anne Arundel County	16
Del. John Gary	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	33	Anne Arundel County	8
Del. Marsha G. Perry	House Office Bldg. Annapolis 21401 ext. 3810	1605 Edgerton Pl. Crofton 21114 721-7034	33	Anne Arundel County	4
Del. Elizabeth S. Smith	House Office Bldg. Annapolis 21401 ext. 3810	3438 Merrimac Rd. Harbor Hills Davidsonville 21035 269-0724	33	Anne Arundel County	16
Sen. Bernie Fowler	Senate Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 459 Prince Frederick 20678 535-3366	29	Anne Arundel, Calvert, St. Mary's Counties	8
Del. J. Ernest Bell, II	House Office Bldg. Annapolis 21401 ext. 3810	10 Court House Dr. P.O. Box 362 Leonardtwn 20650 475-8421	29	Calvert, St. Mary's Counties	8
Del. George Owings, III	House Office Bldg. Annapolis 21401 ext. 3810	Box 3, Rt. 778 Owings 20736 855-4100	29	Anne Arundel, Calvert Counties	3
Del. John F. Slade, III	House Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 20 Valley Lee 20692 475-5151	29	St. Mary's County	8



<b>Legislator</b>	<b>Session Address</b>	<b>District Address</b>	<b>Legis. District</b>	<b>County/ City</b>	<b>Years in Legis.</b>
Sen. Larry Young	Senate Office Bldg. Annapolis 21401 ext. 3810	516 N. Charles St., Suite 1B Baltimore 21201 576-8614	39	Baltimore City	16
Del. Elijah E. Cummings	House Office Bldg. Annapolis 21401 ext. 3810	2225 St. Paul St. Baltimore 21218 366-7212	39	Baltimore City	8
Del. John D. Jefferies	House Office Bldg. Annapolis 21401 ext. 3810	1018 W. Lanvale St. Baltimore 21217 426-0516	39	Baltimore City	2
Del. Ruth M. Kirk	House Office Bldg. Annapolis 21401 ext. 3810	516 N. Charles St., Suite 1B Baltimore 21201 576-8614	39	Baltimore City	8
Sen. Ralph M. Hughes	Senate Office Bldg. Annapolis 21401 ext. 3810	2320 North Monroe St. Baltimore 21215 225-0555	40	Baltimore City	8
Del. Tony E. Fulton	House Office Bldg. Annapolis 21401 ext. 3810	2106 Bolton St. Baltimore 21217 383-7046	40	Baltimore City	4
Del. Salima S. Marriott	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	40	Baltimore City	
Del. Howard P. Rawlings	House Office Bldg. Annapolis 21401 ext. 3810	3502 Sequoia Ave. Baltimore 21215 466-4224	40	Baltimore City	12
Sen. Clarence W. Blount	Senate Office Bldg. Annapolis 21401 ext. 3810	4811 Liberty Hgts. Ave. Baltimore 21207 466-1197	41	Baltimore City	19
Del. Frank D. Boston	House Office Bldg. Annapolis 21401 ext. 3810	2200 Garrison Blvd. Baltimore 21216 566-3373	41	Baltimore City	4
Del. Margaret H. Murphy	House Office Bldg. Annapolis 21401 ext. 3810	4811 Liberty Hgts. Ave. Baltimore 21207 367-5811	41	Baltimore City	12
Del. Samuel M. Parham	House Office Bldg. Annapolis 21401 ext. 3810	4811 Liberty Hgts. Ave. Baltimore 21207 367-7455	41	Baltimore City	2
Sen. Barbara A. Hoffman	Senate Office Bldg. Annapolis 21401 ext. 3810	6609 Reisterstown Rd. Suite 104 Baltimore 21215 764-3614	42	Baltimore City	7
Del. James W. Campbell	House Office Bldg. Annapolis 21401 ext. 3810	1329 ½ W. 41st St. Baltimore 21211 366-8160	42	Baltimore City	12
Del. Delores G. Kelley	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	42	Baltimore City	
Del. Samuel I. Rosenberg	House Office Bldg. Annapolis 21401 ext. 3810	6609 Reisterstown Rd. Suite 104 Baltimore 21215 764-3614	42	Baltimore City	8

<b>Legislator</b>	<b>Session Address</b>	<b>District Address</b>	<b>Legis. District</b>	<b>County/ City</b>	<b>Years in Legis.</b>
Sen. John A. Pica, Jr.	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	43	Baltimore City	12
Del. Gerald J. Curran	House Office Bldg. Annapolis 21401 ext. 3810	502 Baltimore Ave. Towson 21204 825-6300	43	Baltimore City	24
Del. Ann Marie Doory	House Office Bldg. Annapolis 21401 ext. 3810	112 Taplow Road Baltimore 21212 323-0401	43	Baltimore City	4
Del. Henry R. Hergenroeder, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	351 Homeland Southway Apt. 3-A Baltimore 21212 433-4093	43	Baltimore City	24
Sen. Julian L. Lapidés	Senate Office Bldg. Annapolis 21401 ext. 3810	807 Cathedral St. Baltimore 21201 752-4519	44	Baltimore City	28
Del. Curt Anderson	House Office Bldg. Annapolis 21401 ext. 3810	1664 North Gate Rd. Baltimore 21218 323-6425	44	Baltimore City	8
Del. Kenneth C. Montague, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	1532 Havenwood Rd. Northwood Shopping Ctr. Baltimore 21218 243-3904	44	Baltimore City	4
Del. Anne Scarlett Perkins	House Office Bldg. Annapolis 21401 ext. 3810	1532 Havenwood Rd. Northwood Shopping Ctr. Baltimore 21218 243-3904	44	Baltimore City	12
Sen. Nathan C. Irby, Jr.	Senate Office Bldg. Annapolis 21401 ext. 3810	2021 E. Biddle St. Baltimore 21213 675-3000	45	Baltimore City	8
Del. Clarence Davis	House Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 33167 Baltimore 21218 366-0483	45	Baltimore City	8
Del. John Douglass	House Office Bldg. Annapolis 21401 ext. 3810	1535 East North Ave. Baltimore 21213 752-6653	45	Baltimore City	19
Del. Hattie N. Harrison	House Office Bldg. Annapolis 21401 ext. 3810	1054 N. Milton St. Baltimore 21213 342-4414	45	Baltimore City	17
Sen. American Joe Miedusiewski	Senate Office Bldg. Annapolis 21401 ext. 3810	421 South Highland Ave. Baltimore 21224 276-8225	46	Baltimore City	16
Del. Anthony M. DiPietro, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	225 South Clinton St. Baltimore 21224 325-5400	46	Baltimore City	12
Del. Cornell N. Dypski	House Office Bldg. Annapolis 21401 ext. 3810	638 S. Decker Ave. Baltimore 21224 276-1974	46	Baltimore City	11
Del. Carolyn D. Krysiak	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	46	Baltimore City	



Legislator	Session Address	District Address	Legis. District	County/ City	Years in Legis.
Sen. George W. Della, Jr.	Senate Office Bldg. Annapolis 21401 ext. 3810	801 Light Street Baltimore 21230 244-8400	47	Baltimore City	8
Del. R. Charles Avara	House Office Bldg. Annapolis 21401 ext. 3810	3508 Coolidge Ave. Baltimore 21229 644-3057	47	Baltimore City	24
Del. Brian K. McHale	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	47	Baltimore City	
Del. Paul E. Weisengoff	House Office Bldg. Annapolis 21401 ext. 3810	1904 Griffis Ave. Baltimore 21230 644-6144	47	Baltimore City	24
Sen. Michael J. Collins	Senate Office Bldg. Annapolis 21401 ext. 3810	418 Eastern Blvd. Baltimore 21221 391-7800	6	Baltimore County	11
Del. Leslie D. Hutchinson	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	6	Baltimore County	
Del. E. Farrell Maddox	House Office Bldg. Annapolis 21401 ext. 3810	5807 Pinehill Dr. White Marsh 21162 391-7800	6	Baltimore County	4
Del. Michael H. Weir	House Office Bldg. Annapolis 21401 ext. 3810	418 Eastern Blvd. Baltimore 21221 391-7800	6	Baltimore County	16
Sen. Norman R. Stone, Jr.	Senate Office Bldg. Annapolis 21401 ext. 3810	6905 Dunmanway Dundalk 21222 288-5270	7	Baltimore County	27
Del. John S. Arnick	House Office Bldg. Annapolis 21401 ext. 3810	7918 Diehlwood Rd. Baltimore 21222 285-2109	7	Baltimore County	20
Del. Louis L. DePazzo	House Office Bldg. Annapolis 21401 ext. 3810	1818 Tyler Road Dundalk 21222 288-9303	7	Baltimore County	12
Del. Connie C. Galiazzo	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	7	Baltimore County	
Sen. Thomas L. Bromwell	Senate Office Bldg. Annapolis 21401 ext. 3810	7503 Belair Road Baltimore 21236 665-5470	8	Baltimore County	8
Del. Joe Bartenfelder	House Office Bldg. Annapolis 21401 ext. 3810	8410 Belair Road Baltimore 21236 529-2144	8	Baltimore County	7
Del. James F. Ports	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	8	Baltimore County	
Del. Alf W. Redmer, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	8	Baltimore County	

Legislator	Session Address	District Address	Legis. District	County/ City	Years in Legis.
Sen. F. Vernon Boozer	Senate Office Bldg. Annapolis 21401 ext. 3810	614 Bosley Ave. Towson 21204 828-0669	9	Baltimore County	16
Del. John J. Bishop	House Office Bldg. Annapolis 21401 ext. 3810	1520 Doxbury Road Towson 21204 321-9544	9	Baltimore County	4
Del. Gerry L. Brewster	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	9	Baltimore County	
Del. Martha S. Klima	House Office Bldg. Annapolis 21401 ext. 3810	1403 Newport Pl. Lutherville 21093 337-2799	9	Baltimore County	8
Sen. Janice D. Piccinini	Senate Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	10	Baltimore County	
Del. Robert L. Ehrlich, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	5 Elphin Ct., #102 Timonium 21093 252-4180	10	Baltimore County	4
Del. A. Wade Kach	House Office Bldg. Annapolis 21401 ext. 3810	214 Ashland Road Cockeysville 21031 527-1962	10	Baltimore County	16
Del. Ellen R. Sauerbrey	House Office Bldg. Annapolis 21401 ext. 3810	4122 Sweet Air Rd. Baldwin 21013 592-2200	10	Baltimore County	12
Sen. Paula C. Hollinger	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	11	Baltimore County	11
Del. Leon Albin	House Office Bldg. Annapolis 21401 ext. 3810	6512 Edenvale Rd. Baltimore 21209 486-1365	11	Baltimore County	4
Del. Theodore Levin	House Office Bldg. Annapolis 21401 ext. 3810	626 Ralston Ave. Baltimore 21209 486-0462	11	Baltimore County	16
Del. Richard Rynd	House Office Bldg. Annapolis 21401 ext. 3810	8570 Leisure Hill Dr. Baltimore 21208 484-0426	11	Baltimore County	11
Sen. Nancy L. Murphy	Senate Office Bldg. Annapolis 21401 ext. 3810	1330 Sulphur Spring Rd. 2nd Floor Baltimore 21227 242-5699	12	Baltimore County	9
Del. Thomas E. Dewberry	House Office Bldg. Annapolis 21401 ext. 3810	5443 Valley Road Baltimore 21228 788-5550	12	Baltimore County	2
Del. Kenneth H. Masters	House Office Bldg. Annapolis 21401 ext. 3810	1809 Edmondson Ave. Catonsville 21228 747-0407	12	Baltimore County	12
Del. Louis P. Morsberger	House Office Bldg. Annapolis 21401 ext. 3810	612 Hilton Avenue Catonsville 21228 747-0407	12	Baltimore County	16



<b>Legislator</b>	<b>Session Address</b>	<b>District Address</b>	<b>Legis. District</b>	<b>County/ City</b>	<b>Years in Legis.</b>
Sen. Larry E. Haines	Senate Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	5	Baltimore, Carroll Counties	
Del. Richard N. Dixon	House Office Bldg. Annapolis 21401 ext. 3810	1224 Western Chapel Rd. New Windsor 21776 848-6945	5	Carroll County	8
Del. Lawrence A. LaMotte	House Office Bldg. Annapolis 21401 ext. 3810	2702 Melrose Ave. Woodstock 21163 461-5548	5	Baltimore, Carroll Counties	8
Del. Richard C. Matthews	House Office Bldg. Annapolis 21401 ext. 3810	1309 Taylor St. Hampstead 21074 239-7600	5	Carroll County	24
Sen. Walter M. Baker	Senate Office Bldg. Annapolis 21401 ext. 3810	153 East Main St. Elkton 21921 398-0980	36	Caroline, Cecil, Kent, Queen Anne's, Talbot Counties	12
Del. C. Roland Franks	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	36	Caroline, Cecil, Kent, Queen Anne's, Talbot Counties	
Del. Ronald A. Guns	House Office Bldg. Annapolis 21401 ext. 3810	80 Fifth Avenue Elkton 21921 398-6847	36	Caroline, Cecil, Kent, Queen Anne's, Talbot Counties	8
Del. R. Clayton Mitchell, Jr.	H100 State House Annapolis 21401 ext. 3800	H100 State House Annapolis 21401 ext. 3800	36	Caroline, Cecil, Kent, Queen Anne's, Talbot Counties	20
Sen. Frederick C. Malkus	Senate Office Bldg. Annapolis 21401 ext. 3810	500 Spring Street P.O. Box 316 Cambridge 21613 228-1911	37	Caroline, Dorchester, Talbot, Wicomico Counties	44
Del. Samuel Q. Johnson, III	House Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 200 Hebron 21830 546-2400	37	Caroline, Dorchester, Talbot, Wicomico Counties	8
Del. Robert Thornton, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	37	Caroline, Dorchester, Talbot, Wicomico Counties	
Del. Kenneth D. Schisler	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	37	Caroline, Dorchester, Talbot, Wicomico Counties	
Sen. Charles H. Smelser	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	4	Carroll, Frederick, Howard Counties	35
Del. Donald B. Elliott	House Office Bldg. Annapolis 21401 ext. -3810	204 Lambert Ave. Box 370 New Windsor 21776 848-5373	4	Carroll, Howard Counties	4
Del. Thomas H. Hattery	House Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 88 Mount Airy 21771 694-0123	4	Frederick County	8
Del. George H. Littrell, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	5209 Reel's Mill Rd. Frederick 21701 662-4367	4	Frederick County	8

Legislator	Session Address	District Address	Legis. District	County/City	Years in Legis.
Sen. William H. Amoss	Senate Office Bldg. Annapolis 21401 ext. 3810	2303 Bel Air Rd. P.O. Box 496 Fallston 21047 879-7272	35	Cecil, Harford Counties	15
Del. Donald C. Fry	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	35	Harford County	
Del. James M. Harkins	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	35	Cecil County	
Del. Ethel Ann Murray	House Office Bldg. Annapolis 21401 ext. 3810	553 Jackson Hall School Elkton 21921 398-2040	35	Harford County	8
Sen. James Simpson	Senate Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 888 Waldorf 20604 645-2235	28	Charles, St. Mary's Counties	16
Del. Stephen J. Braun	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	28	Charles County	
Del. Michael J. Sprague	House Office Bldg. Annapolis 21401 ext. 3810	P.O. Box 37 Bryans Road 20616 375-7995	28	Charles County	16
Del. John F. Wood, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	Rt. 8, Box 1D Mechanicsville 20659 884-2345	28	Charles, St. Mary's Counties	4
Sen. John W. Derr	Senate Office Bldg. Annapolis 21401 ext. 3810	13 West Second St. Frederick 21701 695-5733	3	Frederick, Washington Counties	7
Del. James E. McClellan	House Office Bldg. Annapolis 21401 ext. 3810	215 Rockwell Terrace Frederick 21701 662-3804	3	Frederick, Washington Counties	12
Del. Bruce Poole	House Office Bldg. Annapolis 21401 ext. 3810	24 Jonathan St. Suite 207 Hagerstown 21740 739-6409	3	Washington County	4
Del. J. Anita Stup	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	3	Frederick, Washington Counties	
Sen. Habern Freeman	Senate Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	34	Harford County	
Del. Rose Mary Bonsack	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	34	Harford County	
Del. David R. Craig	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	34	Harford County	
Del. Mary Louise Preis	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	34	Harford County	



<b>Legislator</b>	<b>Session Address</b>	<b>District Address</b>	<b>Legis. District</b>	<b>County/ City</b>	<b>Years in Legis.</b>
Sen. Thomas M. Yeager	Senate Office Bldg. Annapolis 21401 ext. 3810	413 Main Street Laurel 20707 498-3400	13	Howard, Prince George's Counties	7
Del. Martin G. Madden	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	13	Howard, Prince George's Counties	
Del. John S. Morgan	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	13	Howard, Prince George's Counties	
Del. Virginia M. Thomas	House Office Bldg. Annapolis 21401 ext. 3810	6153 Forty Winks Way Columbia 21045 730-0485	13	Howard County	8
Sen. Christopher McCabe	Senate Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	14	Howard, Montgomery Counties	
Del. Joel Chasnoff	House Office Bldg. Annapolis 21401 ext. 3810	17904 Georgia Ave. Olney Bldg., Suite 210 Olney 20832 924-4200	14	Montgomery County	16
Del. Robert L. Flanagan	House Office Bldg. Annapolis 21401 ext. 3810	12400 Clarksville Pike Clarksville 21029 988-9818	14	Howard County	4
Del. Robert H. Kittleman	House Office Bldg. Annapolis 21401 ext. 3810	12400 Clarksville Pike Clarksville 21029 988-9818	14	Howard County	8
Sen. Laurence Levitan	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	15	Montgomery County	19
Del. Gene W. Counihan	House Office Bldg. Annapolis 21401 ext. 3810	9901 Dellcastle Rd. Gaithersburg 20879 977-5045	15	Montgomery County	8
Del. Richard LaVay	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	15	Montgomery County	
Del. Jean Roesser	House Office Bldg. Annapolis 21401 ext. 3810	10830 Fox Hunt Lane Potomac 20854 299-9046	15	Montgomery County	4
Sen. Howard A. Denis	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	16	Montgomery County	13
Del. Brian E. Frosh	House Office Bldg. Annapolis 21401 ext. 3810	7315 Wisconsin Ave. Suite 800 West Bethesda 20814 652-2888	16	Montgomery County	4
Del. Gilbert J. Genn	House Office Bldg. Annapolis 21401 ext. 3810	11300 Rockville Pike 1 Central Plaza, Suite 1204 North Bethesda 20852 881-7700	16	Montgomery County	4
Del. Nancy K. Kopp	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	16	Montgomery County	16

Legislator	Session Address	District Address	Legis. District	County/ City	Years in Legis.
Sen. Mary Boergers	Senate Office Bldg. Annapolis 21401 ext. 3810	4417 Puller Dr. Kensington 20895 564-0508	17	Montgomery County	9
Del. Kumar P. Barve	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	17	Montgomery County	
Del. Jennie M. Forehand	House Office Bldg. Annapolis 21401 ext. 3810	712 Smallwood Road Rockville 20850 762-4772	17	Montgomery County	12
Del. Michael R. Gordon	House Office Bldg. Annapolis 21401 ext. 3810	416 Hungerford Dr. Rockville 20850 294-2100	17	Montgomery County	8
Sen. Patricia R. Sher	Senate Office Bldg. Annapolis 21401 ext. 3810	1916 Rookwood Rd. Silver Spring 20910 589-7188	18	Montgomery County	12
Del. Patricia Billings	House Office Bldg. Annapolis 21401 ext. 3810	3904 Rickover Rd. Silver Spring 20910 946-5916	18	Montgomery County	2
Del. John A. Hurson	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	18	Montgomery County	
Del. Charles Van Hollen, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	18	Montgomery County	
Sen. Idamae Garrett	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 2140 ext. 3810	19	Montgomery County	10
Del. Henry B. Heller	House Office Bldg. Annapolis 21401 ext. 3810	12706 Turkey Branch Pkwy. Rockville 20853 949-4265	19	Montgomery County	4
Del. Carol S. Petzold	House Office Bldg. Annapolis 21401 ext. 3810	14113 Chadwick Lane Rockville 20853 871-7413	19	Montgomery County	4
Del. Leonard H. Teitelbaum	House Office Bldg. Annapolis 21401 ext. 3810	11805 Auth Lane Silver Spring 20902 921-8282	19	Montgomery County	4
Sen. Ida G. Ruben	Senate Office Bldg. Annapolis 21401 ext. 3810	11 Schindler Court Silver Spring 20903 439-2332	20	Montgomery County	15
Del. Dana Lee Dembrow	House Office Bldg. Annapolis 21401 ext. 3810	11215 Oakleaf Dr. #908 Silver Spring 20901 681-3673	20	Montgomery County	4
Del. Peter Franchot	House Office Bldg. Annapolis 21401 ext. 3810	7111 Sycamore Ave. Takoma Park 20912 270-4001	20	Montgomery County	4
Del. Sheila Hixson	House Office Bldg. Annapolis 21401 ext. 3810	1008 Broadmore Circle Silver Spring 20904 384-4739	20	Montgomery County	14



<b>Legislator</b>	<b>Session Address</b>	<b>District Address</b>	<b>Legis. District</b>	<b>County/ City</b>	<b>Years in Legis.</b>
Sen. Arthur Dorman	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	21	Prince George's County	25
Del. Timothy F. Maloney	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	21	Prince George's County	12
Del. Pauline H. Menes	House Office Bldg. Annapolis 21401 ext. 3810	3517 Marlborough Way College Park 20740 935-6270	21	Prince George's County	24
Del. James C. Rosapepe	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	21	Prince George's County	4
Sen. Thomas P. O'Reilly	PW Sen. Off. Bldg. Annapolis 21401 ext. 3155	7219 Hanover Pkwy. Suites C & D Greenbelt 20770 345-6900	22	Prince George's County	16
Del. Anne Healy	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	22	Prince George's County	
Del. Richard A. Palumbo	House Office Bldg. Annapolis 21401 ext. 3810	4004 St. Barnabas Rd. Suitland 20746 423-8300	22	Prince George's County	12
Del. Paul G. Pinsky	House Office Bldg. Annapolis 21401 ext. 3810	6205 Inwood St. Cheverly 20785 772-1287	22	Prince George's County	4
Sen. Leo E. Green	Senate Office Bldg. Annapolis 21401 ext. 3810	3123 Belair Dr. Bowie 20715 464-8777	23	Prince George's County	12
Del. Mary A. Conroy	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	23	Prince George's County	4
Del. Joan Breslin Pitkin	House Office Bldg. Annapolis 21401 ext. 3810	12005 Long Ridge Lane Bowie 20715 262-0538	23	Prince George's County	12
Del. Charles J. Ryan	House Office Bldg. Annapolis 21401 ext. 3810	House Office Bldg. Annapolis 21401 ext. 3810	23	Prince George's County	12
Sen. Decatur W. Trotter	Senate Office Bldg. Annapolis 21401 ext. 3810	Senate Office Bldg. Annapolis 21401 ext. 3810	24	Prince George's County	11
Del. Joanne C. Benson	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	24	Prince George's County	
Del. Nathaniel Exum	House Office Bldg. Annapolis 21401 ext. 3810	5611 Landover Rd. Hyattsville 20784 277-7501	24	Prince George's County	16
Del. Sylvania W. Woods, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	5611 Landover Rd. Hyattsville 20784 277-7503	24	Prince George's County	12

<b>Legislator</b>	<b>Session Address</b>	<b>District Address</b>	<b>Legis. District</b>	<b>County/ City</b>	<b>Years in Legis.</b>
Sen. Albert R. Wynn	Senate Office Bldg. Annapolis 21401 ext. 3810	8700 Central Ave. Suite 306 Landover 20785 350-5055	25	Prince George's County	7
Del. Michael Arrington	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	25	Prince George's County	
Del. Ulysses Currie	House Office Bldg. Annapolis 21401 ext. 3810	7315 Calder Drive Capitol Heights 20743 350-3345	25	Prince George's County	4
Del. Beatrice D. Tignor	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	25	Prince George's County	
Sen. Gloria Lawlah	Senate Office Bldg. Annapolis 21401 ext. 3810	3801 24th Ave. Hillcrest Heights 20748 894-3082	26	Prince George's County	4
Del. Rosa Lee Blumenthal	House Office Bldg. Annapolis 21401 ext. 3810	4400 Stamp Rd. Suite 212 Temple Hills 20748 423-4130	26	Prince George's County	4
Del. Christine M. Jones	House Office Bldg. Annapolis 21401 ext. 3810	3518 Everest Dr. Hillcrest Heights 20748 505-2400	26	Prince George's County	8
Del. David Valderrama	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	26	Prince George's County	
Sen. Thomas V. Mike Miller, Jr.	H107 State House Annapolis 21401 ext. 3700	H107 State House Annapolis 21401 ext. 3700	27	Prince George's County	16
Del. Gary R. Alexander	House Office Bldg. Annapolis 21401 ext. 3810	11414 Livingston Rd. Ft. Wash. Prof. Park Ft. Washington 20744 292-3300	27	Prince George's County	4
Del. James E. Proctor, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	27	Prince George's County	
Del. Joseph F. Vallario, Jr.	House Office Bldg. Annapolis 21401 ext. 3810	5210 Auth Rd., 6th Flr. Suitland 20746 423-8100	27	Prince George's County	15
Sen. Lewis R. Riley	Senate Office Bldg. Annapolis 21401 ext. 3810	Box 130 Parsonsbury 21849 742-3999	38	Somerset, Wicomico, Worcester Counties	11
Del. Bennett Bozman	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	38	Somerset, Wicomico, Worcester Counties	
Del. Norman H. Conway	House Office Bldg. Annapolis 21401 ext. 3810	1312 Whittier Dr. Salisbury 21801 543-9060	38	Somerset, Wicomico, Worcester Counties	4
Del. J. Lowell Stoltzfus	House Office Bldg. Annapolis 21401 ext. 3810	Unknown at press time	38	Somerset, Wicomico, Worcester Counties	



# P.I.E.'s quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. P.I.E. Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

## **QRP FACTS:**

**Strict Underwriting Criteria** — Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

**Scheduled Premium Reductions** — Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

**High Limits** — Backed by our reinsurer, Lloyd's of London, P.I.E. is able to offer higher coverage limits for qualifying doctors: up to

\$7 million for individual doctors and \$13 million for group policies. Lloyd's of London is the largest reinsurer in the world.

**Designed With Input from Doctors** — P.I.E.'s QRP plan is an innovative modified claims-made insurance specially designed with input from P.I.E.-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your P.I.E. representative, or our headquarters office today.

---

## THE P.I.E. MUTUAL INSURANCE COMPANY

---

North Point Tower • 1001 Lakeside Ave. • Suite 1800  
Cleveland, OH 44114-1149 • (216) 736-8400 • (800) 228-2335

---

Winterich • Neff & Associates  
7 East Redwood • Suite 810  
Baltimore, Maryland 21202  
(301) 234-2800



# Join us in a new kind of partnership ... uniting doctors, lawyers, teachers, parents, and youth against drug and alcohol abuse.

Become part of the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the



war against drugs. Become part of a unique initiative in Maryland to bring doctor/lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations Department  
at 301-539-0872, 1-800-492-1056.**

Doctor/Lawyer/Teacher Partnership Against Drugs



## Board of Physician Quality Assurance Actions

**In the Matter of  
Michael F. Corner, Physician Assistant  
Before the  
State Board of  
Physician Quality Assurance**

### Consent Order

Having reviewed certain information which came to its attention, the Board of Physician Quality Assurance (the Board), pursuant to its authority under *MD State Government Code Ann.* §10-405(b) (1989), on November 22, 1989, voted to summarily suspend the certification of Michael F. Corner PA (the Respondent), to practice as a physician assistant in the State of Maryland. The Order for Summary Suspension was executed on behalf of the Board by Israel H. Weiner MD, Chairperson of the Board, on November 29, 1989.

On February 28, 1990, the Board charged the Respondent pursuant to *MD Health Occ. Code Ann.* §14.5-312(3), specifically voting to charge the Respondent with a prohibited act under *MD Health Occ. Code Ann.* §14-504(b) (1989 Cum. Supp.). The pertinent provision of the Maryland Medical Practice Act (the Act) provides:

(b) Crimes involving moral turpitude.

- (1) Subject to the Administrative Procedure Act, the Board shall order the suspension of a license if the licensee is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction or plea set aside.
- (2) After completion of the appellate process, if the conviction has not been reversed or the plea has not been set aside with respect to a crime involving moral turpitude, the Board shall order the revocation of a license subject to the hearing provisions of §14-505 of this subtitle.

The basis of the charge involved the results of an investigation conducted by the Baltimore City Police Department Sex Offense Unit into allegations of sexual abuse of a minor by the Respondent. As a result of this investigation, the Respondent was indicted by the Grand Jury for Baltimore City for the charge of third degree sexual offense. On December 12, 1989, the Respondent pled guilty to the charge of third degree sexual offense. Respondent was granted probation before judgment at sentencing on this same date.

On May 2, 1990, a Settlement Conference was held. As a result of negotiations during the Settlement Conference, the Respondent and the Board voted to accept the following Consent Order, which includes Findings of Fact, Conclusions of Law, and Order.

### Findings of Fact

1. At all times relevant hereto, Respondent was certified to practice as a physician assistant in the State of

Maryland. Respondent was indicted by the Grand Jury for Baltimore City on September 8, 1989 for the charge of third degree sexual offense.

2. On or about November 29, 1989, Respondent's State certification to practice as a physician assistant was summarily suspended by the Board as a result of an investigation by the Board into matters serving as the basis for the said indictment. A copy of the Order for Summary Suspension is attached hereto and is incorporated herein as Exhibit A.

3. On December 12, 1989, in the Circuit Court for Baltimore City, Respondent pled guilty to the aforementioned charges. Respondent was granted probation before judgment under Art. 27 §641 (1989 Cum. Supp.) of the *Annotated Code of Maryland*. Respondent was sentenced to a three-year period of supervised probation. As part of that probation, Respondent was ordered to perform seventy-five hours of community service, and to pay the court costs within thirty days.

4. A third degree sexual offense is a crime of moral turpitude.

### Conclusions of Law

Based on the foregoing Findings of Fact, the Board concludes that the Respondent has pled guilty to a crime of moral turpitude. Accordingly, the Board concludes as a matter of Law that the Respondent has violated §§14.5-312(3) and 14-504(b) of the Act.

### Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this twenty-second day of August 1990, by the Board, hereby:

ORDERED that pursuant to the authority vested in the Board by §14.5-312 of the Act, the Respondent's certification to practice as a physician assistant in the State of Maryland is hereby REVOKED; and be it further

ORDERED that on or after November 29, 1990, the Board will entertain a petition by Respondent for reinstatement of his certification to practice as a physician assistant, provided that Respondent, should he petition for reinstatement, complies with the following conditions:

1. The Respondent shall bear the burden of demonstrating, at the time of his petition for reinstatement before the Board, or upon a hearing granted thereto, that he is not a danger to the public;

2. The Respondent shall submit to a psychiatric evaluation by a Board-approved psychiatrist, as a condition precedent to the Respondent's petition for reinstatement, and shall agree, as part of his petition for reinstatement, to release to the Board copies of all

relevant psychiatric reports produced as a result of this evaluation, as the Board, in its discretion, requests;

3. The Respondent shall bear the costs associated with any psychiatric or other evaluations directed by the Board in fulfillment of the provisions of this Consent Order; and be it further

ORDERED that the Respondent shall agree that, should his certification to practice as a physician assistant be reinstated by the Board, the Respondent shall not treat any individuals under eighteen years of age in his capacity as a physician assistant; and be it further

ORDERED that the Board's Order for Summary Suspension, dated November 29, 1989, suspending Respondent's certification to practice as a physician assistant on an emergency basis, shall be and hereby is, immediately vacated upon the effective date of this Consent Order, that being the date on which the Board signs the Consent Order; and be it further

ORDERED that any public disclosure of the foregoing Consent Order shall consist of the contents of this CONSENT ORDER as permitted by *State Government Code Ann.* §10-617(h).

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Consent

I, Michael F. Corner PA, acknowledge that I am represented by Jack B. Rubin, Esquire, and I have had the opportunity to consult with counsel before entering into and signing this document. By this consent, I hereby admit the truth of the Findings of Fact, Conclusions of Law, and accept and submit to the foregoing Consent Order and its conditions, consisting of seven pages.

I acknowledge the validity of this Consent Order as if entered after the conclusion of a formal evidentiary hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my behalf, and to all other substantive and procedural protections provided by the laws of the State of Maryland. I acknowledge the legal authority and the jurisdiction of the Board to initiate these proceedings and to issue and enforce this Consent Order. I also recognize that I am waiving my right to appeal any adverse ruling of the Board that might have followed any such hearing.

By this consent, I acknowledge that my failure to abide by the conditions of the Consent Order may result in the Board's refusal to consider any reapplication for reinstatement of my certification to practice as a physician assistant.

I sign this Order after having an opportunity to consult with counsel, without reservation, and I fully understand and comprehend the language, meaning, and terms of this Consent Order.

MICHAEL F. CORNER

### Exhibit A

In the Matter of  
Michael F. Corner, Physician Assistant,  
Before the  
State Board of  
Physician Quality Assurance

#### Order of Summary Suspension of Certification to Practice as a Physician Assistant

The State Board of Physician Quality Assurance (the Board) herein sets forth the following background information as pertinent to this Order for Summary Suspension (the Emergency Suspension) with regard to the certification of Michael F. Corner, to practice as a physician assistant.

1. Respondent was and is presently certified to practice as a physician assistant in the State of Maryland.

2. On or about March 22, 1989, Subject A<sup>1</sup> reported an act of alleged sexual abuse involving Respondent and her nine-year old daughter, Subject B, to the State of Maryland Department of Social Services (DSS). DSS then referred the matter to the Baltimore City State's Attorney's Office (SAO).

3. On or about August 17, 1989, representatives of the SAO Sex Offense Unit interviewed Subject B, who stated that Respondent, whom Subject B identified as Subject A's boyfriend, on several occasions between January 1988 and June 1989, entered her bedroom and placed his hands between her legs on what Subject B referred to as her "private part" (denoting vagina).

4. On or about September 14, 1989, detectives of the Baltimore City Police Department interviewed Respondent in relation to these allegations. Respondent, after being advised of his Fifth Amendment rights against self-incrimination, and, after agreeing to waive those rights, admitted to nonconsensual, involuntary sexual contact with Subject B; and further admitted another instance of involuntary sexual contact with another young female while living in Indiana in 1974.

5. After the conclusion of this statement, Respondent was placed under arrest by detectives of the Baltimore City Police Department. Respondent was then indicted by the Grand Jury for Baltimore City on September 8, 1989 for the charge of third degree sexual offense. Said charges are scheduled for trial in Baltimore City Circuit Court on December 12, 1989, Part 2.

#### Findings of Fact

Based on the background information set forth above and the exhibits hereto, the Board has reason to believe that the following facts are true:

1. Respondent was and is presently certified to practice as a physician assistant in the State of Maryland.

2. On or about May/June 1986, Respondent was employed as a physician assistant by the Mount Royal Medical Center, Baltimore, MD. At that time, Respondent, in his capacity as a physician assistant, treated Subject A, a patient who sought medical attention at the Center.

3. Thereafter, Subject A sought employment as a secretary at a Mount Royal Medical Center branch facility, the Northwest Medical Center, Baltimore, MD. Respondent then transferred his place of employment to this facility, and then became involved in a continuing personal relationship with Subject A.

4. During the course of this personal relationship, Respondent cohabitated with Subject A and her children, among whom was her nine-year old daughter, Subject B.

5. On September 14, 1989, Respondent was interviewed by Detective Joan McEntyre of the Baltimore City Police Department in which Respondent, after being advised of his Fifth Amendment

1. Subject names are not used in the Summary Suspension. The Board maintains a list of subject names which corresponds to the alphabetical letter used in the Summary Suspension.



rights against self-incrimination, and after agreeing to waive those rights, admitted the following:

- (A) That during an eighteen-month period of time from early 1988 until the time of the statement, Respondent, while cohabitating with Subject A and her family, on eight to ten occasions engaged in nonconsensual, involuntary sexual conduct with nine-year old Subject B;
- (b) That the conduct occurred primarily in Subject B's bedroom when Respondent perceived Subject B to be asleep;
- (c) Respondent's contact consisted of "rubbing her back or stomach or something of that nature and also mak(ing) genital contact with my hand...";
- (d) That Respondent answered affirmatively when asked if he, Respondent, had fondled Subject B's vagina;
- (e) That Respondent engaged in similar nonconsensual, involuntary sexual conduct with another woman friend's daughter, while living in Indiana in 1974.

6. In his practice as a physician assistant, Respondent is certified to perform delegated medical acts under the supervision of a physician. These acts consist, but are not limited to, screening patients, performing physical examinations, performing developmental screening examinations on children, collecting specimens for laboratory tests, and performing clinical procedures involving close physical contact with patients. Respondent, in admitting to engaging in involuntary and nonconsensual sexual contact with at least two young females, poses a grave risk and imminent danger to the public health, safety, and welfare of the citizens of Maryland in that, in his capacity as a physician assistant, Respondent maintains the opportunity, through the delegated acts to which he is authorized to perform, to come into unsupervised, intimate physical contact with both children and adults.

#### Conclusions of Law

Based on the foregoing facts, the Board concludes that the public health, safety, and welfare imperatively require emergency action in this case pursuant to State Government Article §10-405(b), *Annotated Code of Maryland*.

#### Order

It is this twenty-ninth day of November 1989 by the State Board of Physician Quality Assurance:

ORDERED that pursuant to the authority vested in the Board by the State Government Article, §10-405 of the *Annotated Code of Maryland*, Respondent's State certification to practice as a physician assistant in the State of Maryland be and hereby is **SUMMARILY SUSPENDED**, and be it further

ORDERED that if a hearing is requested to consider this **SUMMARY SUSPENSION**, it shall be held before the Board at its next regularly scheduled meeting, Wednesday, December 13, 1989.

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

## We Make House Calls!



ARCHITECTS  
GENERAL  
CONTRACTORS  
CUSTOM  
RENOVATIONS  
& ADDITIONS

3830 Falls Road, Baltimore, MD 21211-1827 • 301-467-7884

MHC #31255

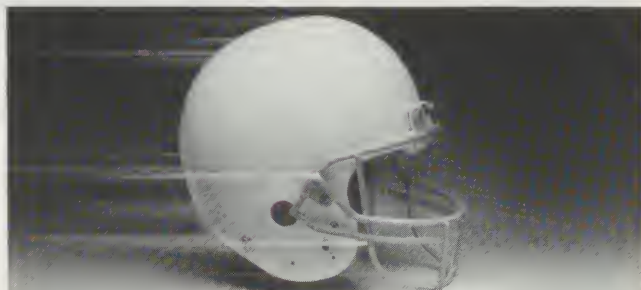
## You Manage The Office Let Us Do The Rest!

Low Cost Initial Investment  
Daily Management Reports  
Accounts Receivable Report  
Service Analysis Report  
Aging Reports  
BC & BS of MD Forms  
MediCare Forms  
Medical Assistance Forms  
Electronic Submission

Claims Resubmission  
HCFA 1500 Forms  
Third Party Billings  
On-Line Trans. History  
Creating Patient Statements  
Statement Mailing Services  
On-Going Support  
In-House Training  
Complete Documentation

To Put The Computer Center, Inc.  
Mainframe Computer To Work  
For You, Just Call:

(301) 728-3883



### When it's time to send in The Special Team.

Here at PSA Financial Center, we utilize a team approach to financial problem solving, and we put together special teams as they are required to deal with special situations.

PSA Professional Liability, Inc., for example, specializes in Medical Malpractice Insurance. Our associates can call upon both in-house staff and outside specialists for their expertise when needed. And because our clients have confidence in our special teams, PSA Professional Liability is now among the largest Malpractice Insurance Agencies in Maryland.

Contact any of our affiliates to enjoy the satisfaction that comes from having a team of financial service specialists working for you.

PSA Professional Liability, Inc.  
Malpractice Insurance

PSA Financial Advisors, Inc.  
Financial Planning

PSA Financial, Inc.  
Employee Benefits



PSA Financial Center  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

PSA Capital Management, Inc.  
Investment Management

PSA Pension Services, Inc.  
Design & Administration

PSA Insurance, Inc.  
Agents & Brokers

PSA Equities, Inc.  
Broker / Dealer

PLANNING FOR OUR CLIENTS FINANCIAL FUTURE



(Left to Right) Angelo J. Troisi, FACHE, Executive Director of Med Chi presents Delegate Joan Breslin Pitkin, Prince George's County Legislative District 23; and Prince George's County States Attorney Alexander Williams, Esq. with MAADA certificates.

### First Annual Drug Abuse Education Conference Was a Success

At the conference, "Practical Clinical Management: Drug Abuse Education for the Primary Care Physician," held October 20-21, 1990 at the Baltimore Convention Center, Floyd Pond, Executive Director of the Governor's Drug and Alcohol Abuse Commission, presented the opening remarks. He extended greetings from Governor William Donald Schaefer and Lt. Governor Melvin A. Steinberg, expressing the Governor's appreciation for Med Chi's involvement in drug abuse education. Mr. Pond congratulated Med Chi physicians, stating that this program was "an excellent example of the initiative and commitment of Med Chi to educate primary care physicians and other health care professionals on drug abuse and should be used as a national model." In his concluding remarks, Mr. Pond discussed the work of the Commission which sets policies, establishes program priorities, and monitors and evaluates the State's substance abuse efforts. The Commission works with local governments as well as a variety of professional, service, fraternal, civic, and youth organizations around the State on the subject of substance abuse.

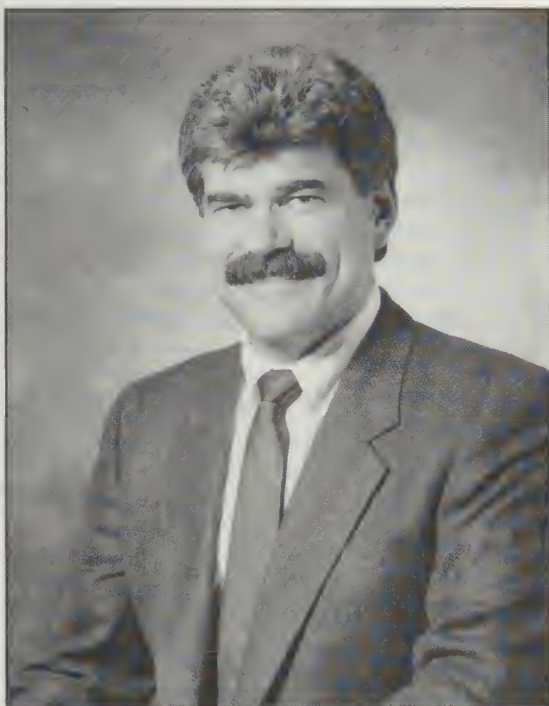
Delegates Joan B. Pitkin and Brian K. McHale were

among the 300 professionals who attended the weekend conference. Physicians, legislators, and health care professionals were offered information by fourteen different speakers on topics such as the epidemiology of drug abuse, the legal aspects of treating an addict, the recognition of the addict, and cocaine as it relates to AIDS and pregnancy.

This drug abuse education conference, which fulfilled twelve CME credits in Category I of the Physicians Recognition Award, was sponsored by the Med Chi Physician Rehabilitation Committee and the Committee on Drugs, in cooperation with the Med Chi Alliance Against Drug Abuse (MAADA) - MAADA is Med Chi's latest effort to unite civic and professional groups against the ever increasing problem of drug abuse in our society.

Professional audio tapes of the conference will be made available and will qualify for 12 CME credits in Category II of the Physicians Recognition Award. If you would like to receive the tapes, please call Vivian Smith, Public Relations Coordinator, at (301) 539-0872 or 1-800-492-1096. ■





J. Leonard Lichtenfeld MD, FACP

*J. Leonard Lichtenfeld MD, FACP*, an attending physician in the Department of Medicine at Sinai Hospital of Baltimore, was recently named to the Board of Trustees of the American Society of Internal Medicine (ASIM), an organization representing 24,000 internists throughout the United States.

A much published author, Dr. Lichtenfeld has been an active member of numerous Med Chi committees including Preventive Medicine and Public Health, Drugs, and Legislative, and was presented with the Med Chi Committee Chairman Recognition Award in 1988.

Currently Vice-president of the Maryland Society of Internal Medicine (MSIM), he received the MSIM's Internist of the Year Award in 1987.

Dr. Lichtenfeld is an Instructor in the Department of Medicine, Johns Hopkins University and hosts a twice-weekly radio show on health issues on WCBM (680 AM, Baltimore).



*Marvin B. Trotsky MD* was recently installed as President of the American Academy of Otolaryngic Allergy (AAOA), an organization for which he has served as

*Physicians' Quality Assurance Board Actions appear regularly in MMJ.*

Membership Chairperson, Co-chairperson for Resident Education, Board Examiner for Fellowship, and as a member of the Council.

An Affiliate Member of Med Chi, Dr. Trotsky is currently a Clinical Assistant Professor of Otolaryngology at Wayne State University College of Medicine. He has four publications to his credit and has presented numerous papers on allergies.



Charles J. Lancelotta MD

*Charles J. Lancelotta MD*, a board certified neurosurgeon, was recently elected Head of the Department of Surgery at Howard County General Hospital. He is the first non-general surgeon to be elected chairman of this ninety-five member department in the seventeen-year history of the hospital.

Dr. Lancelotta is a graduate of Loyola College (summa cum laude) and of the University of Maryland Medical School where he has remained active as a Clinical Assistant Professor of Neurosurgery.

A past president of the Howard County Medical Society, Dr. Lancelotta is currently secretary-treasurer of the Maryland Neurosurgery Society. ■

#### Hotline Numbers for Impaired Professionals

Physicians — 727-0120

Dentists — 964-2275

Attorneys — 685-7878

Pharmacists — 727-0746

Emergency Psychiatric Beds 800-492-0610

KELLY T. DRAKE, M.D.  
ALBERT L. BLUMBERG, M.D.  
ROBERT K. BROOKLAND, M.D.

*proudly announce the addition of*

**EVA S. ZINREICH, M.D.**

*to their practice of*

**RADIATION ONCOLOGY**

*at the*

**GREATER BALTIMORE  
MEDICAL CENTER**

**DRAKE, BLUMBERG &  
BROOKLAND, M.D., P.A.  
6701 North Charles Street  
Baltimore, Maryland 21204  
(301) 828-2540**

### **Physician Placement Services**

**The Medical and Chirurgical Faculty of the State of Maryland** maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

*Physician Placement Service*  
1211 Cathedral St., Baltimore, MD 21201  
(301-539-0872)

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the *Physician Placement Service*. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland.

**MMJ** announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

## **LETTERS FROM THE EDITOR** LETTER

### **Rave Reviews for PPD**

**W**e are all well aware that physicians have a broad range of information needs. Since its inception, *MMJ* has made every effort to address the need for top quality clinical information among Maryland physicians. However, as Medicine and our lives have become more complex, we need an information source that addresses a variety of other topics, not all of which are directly related to Medical Science.

We are happy to announce that Med Chi's new publication, *Physician's Practice Digest (PPD)*, is that source.

*PPD's* first issue, sent to physicians this past fall, included articles on Medicare fraud and abuse, centralized credentialing, marketing, computerization, and financial planning. Comments from readers have been overwhelmingly positive, including:

*"Keep it up! I read this issue cover-to-cover and found (it) timely and very relevant..."*

*"If you continue the same quality magazine, you will have no trouble keeping my attention."*

*"I want to congratulate you, members of the Editorial Board and your staff on the publication...it is very attractive and full of pertinent and useful articles."*

*"...I am most impressed with Physician's Practice Digest. You have done an excellent job in your premiere issue. It is a quality magazine with an excellent focus."*

The second issue of *PPD* will be published this spring. It is our hope and the hope of the Editorial Boards of both *PPD* and *MMJ* that these two publications can work together in the future to insure that Med Chi can address all the information needs of its members.

To submit articles to *PPD*, write:

Executive Editor  
*PPD*  
1211 Cathedral Street  
Baltimore, MD 21201-5585

**MICHAEL R. DOBRIDGE MD**  
Editor, *PPD*

**VICTOR R. HREHOROVICH MD**  
Editor, *MMJ*

### **NOTICE TO AUTHORS** *Floppies Requested*

When submitting manuscripts for review by *MMJ's* Editorial Board, please send an IBM compatible floppy disk with the document entered in a Word Perfect, Multimate, or Wordstar program. At your request *MMJ* will return your disk after your article is published or if your manuscript is not accepted.



## UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

January 24

**Dean's Conference Number 3: Pediatric Infectious Disease and Immunology for the Practicing Clinician**, at the UMAB campus, Medical School Teaching Facility, Baltimore. Fee: \$35. 6 AMA Cat I credits.

February 3, April 3 &  
June 5

**Subspecialty Care in General Practice**, at the University Club, Baltimore. Fee: \$50 (includes dinner). 1 AMA Cat I credit per date. Info: 301-328-6666.

February 21

**Dean's Conference Number 4: Medical Advances for the 21st Century**, at the UMAB Campus, Medical School Teaching Facility. Fee: \$35. 6 AMA Cat I credits.

March 13 - 15

**6th National Traumatic Brain Injury Symposium**, sponsored by the Maryland Institute for Emergency Medical Services Systems, at the UMAB campus. Fee: \$199. Info: Roberta Schwartz 301-328-6101/2478.

March 21

**Dean's Conference Number 5: Health Issues for Men and Women**, at the UMAB Campus, Medical School Teaching Facility. Fee: \$35. 6 AMA Cat I credits.

March 21 - 23

**13th Annual Trauma Symposium**, at the Convention Center, Baltimore. Fee: \$395 before February 22; then, \$425. Credits to be determined. Info: Kimberly Unitas 301-328-2399.

April 25

**Dean's Conference Number 6: Clinical Medicine for the Community Physician; Topics in OB/GYN and Pediatrics**, at Washington County Hospital, Hagerstown, MD. Fee: \$125. 12 AMA Cat I credits; 12 AAFP credits; 12 hours of ACEP credit.

Continuously  
Throughout the Year

**University of Maryland Dean's Conferences** - Held monthly, October through April. Designed for the Family/General Practitioner and Internist. Each conference highlights different clinical departments placing emphasis on the practical methods being used and researched at the University of Maryland. Extension programs are being planned to complement the programs held on the University's Baltimore campus.

**Visiting Professor Program** - A new 1990-1991 directory of speakers and their topics is available for area hospitals and other health care organizations. No administrative fees are charged for this service. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunities for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Hour-for-hour AMA Cat I credits available. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour AMA Cat I credits available. Brochure available.

MISCELLANEOUS  
MEETINGS

- January 19**      **Issues of the Spine and Vascular Disease Update**, sponsored by the Maryland Academy of Family Physicians, at the Stouffer Harborplace Hotel, Baltimore. Fee: \$50 MFAP members; \$75 nonmembers; No charge for residents and medical students. 6 AMA Cat I credits; 6 AAFP prescribed hours. Info: Lee E. Gresser MD, 301-747-1980.
- March 16**      **Technology Update for the Family Physician**, sponsored by the Maryland Academy of Family Physicians, at the Loews Annapolis Hotel, Annapolis, MD. Fee: \$50 MAFP members; \$75 nonmembers; no charge for residents and medical students. 5 AMA Cat I credits; 5 AAFP prescribed hours. Info: William P. Jones MD, 301-747-1980.
- April 10 - 14**      **First World Congress on Stress, Trauma, and Coping in the Emergency Services Professions**, sponsored by The American Critical Incident Stress Foundation, at the Sheraton Inner Harbor Hotel, Baltimore. Info: Jeffrey T. Mitchell PhD, 301-750-0856.
- May 8 - 11**      **193rd Annual Meeting of the Medical and Chirurgical Faculty of Maryland - "American Medicine Today: Perspectives from Maryland,"** at the University of Maryland, University College, Center of Adult Education, College Park, MD. Info: Michael Moran, Convention Director, 1-800-492-1056 or 539-0872 in the Baltimore metro area.

- Shady Grove Adventist Hospital**      **9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.**
- January 10**      **A Case of Sudden Death: CPC Conference**
- January 17 and 24**      **Advances in Treatment of Erectile Dysfunction**
- February 14**      **Update on Hyperbaric Oxygen Therapy**
- February 21**      **Update on Pancreatic Disorders**
- February 18**      **Oral Contraceptives: Benefits and Risks**
- March 7**      **Laparoscopic General Surgery**
- April 25**      **Psychoneuroimmunology: The New Physiology**

- American College of Emergency Physicians**      **1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.**
- Jan. 3 and March 14**      **Board of Directors**
- February 7 and April 4**      **Executive Committee Meeting**
- Jan. 26 and April 13**      **Oral Board Preparation Courses and Private Tutorials**

**Maryland Advertisers!**

To advertise in Med Chi Publications contact:

**Network Publications**

**2701 N. Charles Street, Baltimore, MD 21218**  
**301-235-0500      FAX 301-235-0689**



## THE JOHNS HOPKINS MEDICAL INSTITUTIONS

All courses at the Turner Auditorium unless otherwise indicated. For information on sponsored Continued Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

January 25 - 27

**Frontiers in Research and Clinical Management of Asthma and Allergy**, at the Johns Hopkins Asthma and Allergy Center, Baltimore. Fee: \$295 physicians; \$175 residents and fellows. 15 AMA Cat I credits. Info: 301-955-2959.

January 31 - February 1

**Long-term Care of the Elderly: 18th Annual Johns Hopkins/Mason F. Lord Geriatrics Symposium**. Fee: \$200 physicians; \$150 allied health professionals. Credits to be determined. Info: 301-955-2959.

February - April

**32nd Postgraduate Institute for Pathologists in Clinical Cytopathology** for Board Certified (or qualified) pathologists as a subspecialty residency. 152 AMA Cat I credits in two courses, both of which must be taken. Application and preregistration are advised ASAP; preregistration must be completed before March 15 unless by special arrangement. Info: J. Frost MD or B. Remley, 111 Pathology Building, The Johns Hopkins Hospital, Baltimore, MD 21205 USA (301-955-8594). *The entire course is given in English.*

**February-April Home Study Course A**, personal reading and microscopic study at own lab in preparation for Course B. Course A materials will be sent to each participant within the U.S. and Canada for home study. Participants *outside* the U.S. and Canada must make arrangements to study Course A before Course B.

April 14 - April 25

**In-residence Course B**, lecture series, laboratory, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore.

March 14 - 16

**Brain Chemistry and Behavior: Advances in PET and SPECT Imaging**. Fee: \$440 physicians; \$340 residents. 18 AMA Cat I credits. Info: Patty Campbell 301-955-3839 or Julia Buchanan 301-955-8582.

March 18 - 20

**Spectrum of Developmental Disabilities: Cerebral Palsy - Clinical and Research Issues**. Fee: \$425. 20 AMA Cat I credits. Info: 301-955-2959.

March 21 - 22

**Clinical Care of the Patient with HIV Infection**. Fee: \$300 physicians; \$150 residents. 14 AMA Cat I credits. Info: 301-955-2959.

March 21 - 23

**Fifth National Conference on Student Mental Health: Just Say Yes to the Mental Health Challenges of the 1990s**, at the Homewood Campus. Fee: \$225; \$125 professional-in-training; \$200 (3 or more attending from same institution). Credits to be determined. Info: 301-955-2959.

March 22 - 23

**Phototherapy and Photochemotherapy: An Update for the '90s** at the Harbor Court Hotel, Baltimore. Fee: \$250 physicians; \$200 nurses and technicians; \$150 residents and fellows. 11 AMA Cat I credits; 10 AAD Cat I credits.

April 8 - 13

**18th Annual Pediatric Trends**. Fee: \$575 physicians; \$425 residents and fellows. 45 AMA Cat I credits; 45 PREP. Info: 301-955-2959.

April 15 - 17

**Toxicology Update '91: Concepts and Advances in Immunotoxicology**. Registration info: Catherine Walsh, Course Coordinator, Dept. of Environmental Health Sciences, School of Hygiene and Public Health, Room 6001, 615 North Wolfe St., Baltimore, MD 21205 (301-955-2609).

April 19

**Thyroid Update 1991**. Fee: \$150. 7.5 AMA Cat I credits. Info: 301-955-2959.

Continuously  
Throughout the Year

**Visiting Preceptorship in Pediatric Critical Care Medicine**. Ongoing 5-day preceptorship by appointment. Fee: \$600. 40 AMA Cat I credits. Info: 301-955-2959.

**Ophthalmic Electrophysiology Technician Training Course**. Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore. Info: C. Kearney 301-955-2959.

**The Johns Hopkins  
Medical Institutions  
Continuously  
Throughout the Year**

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. Fee: \$500. 40 AMA Cat I credits.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics/year in 5 bimonthly programs. Individual and group subscriptions. 40 AMA Cat I credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 AMA Cat I credits. Info: P. Williams 301-955-3169.

### Information for Authors

Manuscripts may be sent to Editor, **MMJ**, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

#### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

Include full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles.

Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in **MMJ** is protected by copyright and may not be reproduced without the written permission of both the principal author and **MMJ**.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.

### Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of the *Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel  
**MMJ** 1211 Cathedral Street  
Baltimore, MD 21201

#### Old Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

#### New Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

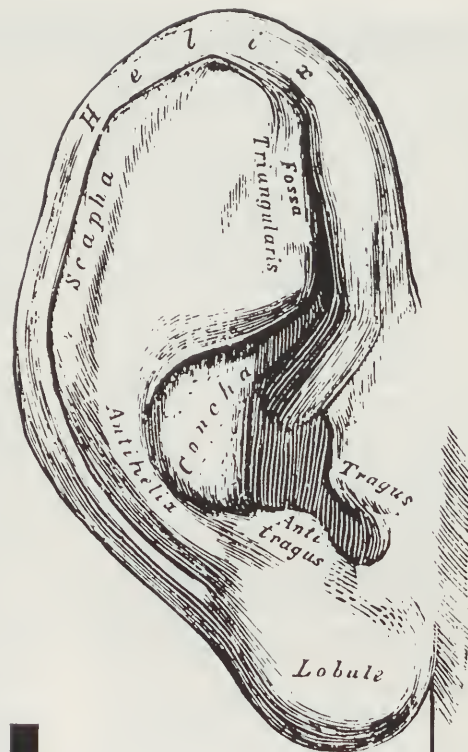
State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_

Date: \_\_\_\_\_



# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas.... and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
maryland

Free to Med Chi members.

**JUNIOR PARTNER WANTED**  
Willing to work part-time and then full-time in successful psychiatric practice in Baltimore County. Please send resumes & letters of recommendation to P.O. Box 32854, Baltimore, MD 21208.

**FAMILY PRACTICE**  
Two female family practice physicians desire a third to join them in an active and growing Pasadena, MD practice. Must be Board Certified. Call Carla Var-num at 255-2700.

**PHYSICIAN WANTED**  
A two physician clinic needs second doctor. US Army Clinic. Letterkenny Army Depot, S. Central PA near Harrisburg and Hagerstown, has opening for Primary Care/Occup. Health (80%/20%). GS 13, licensed in any state, no malpractice insurance, 7:30 a.m. - 4:15 p.m. \$60,000 range. Call Richard Brown 717-267-5314.

**SUCCESSFUL CONSULTATIVE PRIMARY CARE**  
Internal Medicine Group in Laurel seeking BC/BE internist. Active inpatient & outpatient practice with complete diagnostic capabilities in office including certified lab and x-ray. Guaranteed salary with incentive bonus and plans for partnership offer. Liberal benefit package including CME, personal vacation, and insurance coverage. Practice close to Baltimore, Washington, and Annapolis. Send CV to I.M. Associates, P.O. Box 1412, Laurel, MD 20707.

**GENERAL INTERNIST**  
Sub. Wash. DC. To join 2 established internists. BC/BE required. Exciting opportunity. Interest in Geriatrics desirable. Send CV to: Frank M. Ryan MD, 9401 Indian Head High., Ft. Washington, MD 20744.

**PEDIATRICIAN WANTED**  
BC/BE pediatrician wanted to join busy practice in historic college town on Maryland's Eastern Shore. Salary leading to partnership. Reply: John Morgan MD, PO Box 477, Chestertown, MD 21620 (301-778-1420).

**PHYSICIANS WANTED**  
Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

**PRACTICE WANTED**  
Want to buy a Pulmonary/Internal Medicine practice located in Baltimore. Call 301-243-3318 or write Pulmonary/Internal Medicine Practice, 2947 St. Paul St., Balto., MD 21218.

**PRACTICE WANTED**  
BC Family Practitioner looking to purchase General/Family Practice in Towson area. Box 5, MMJ, 1211 Cathedral St., Baltimore, MD 21201.

**FELLS POINT MEDICAL BUILDING**

The **FELLSPOINT MEDICAL BUILDING** will be a 40,000 foot multi-speciality medical building at the corners of Fleet and Central Streets. It is part of the Inner Harbor complex. Occupancy of the building will be late 1992. Leases are available.

Some board certified surgical sub-specialities as well as all medical specialties are needed. A walk-in clinic will be open 18 hours a day-seven days a week.

Serious inquiries only. Contact:

**Lewis B. Newberg, M.D.**  
(301) 988-9529  
FAX: (301) 461-3430

**BECO ASSOCIATES**

**Medical Suites Available**

- Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland
- Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital
- Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland
- White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550



# **MEDICAL**

## **OPHTHALMOLOGIST**

BC, young, personable grad of prestige residency & fellowship, seeks full or part-time practice job in Baltimore/Washington area. Box 6, *MMJ*, 1211 Cathedral St., Baltimore, MD 21201.

## **INTERNAL MEDICINE PRACTICE FOR SALE**

Excellent Pikesville location. Established MD is retiring. Spacious 1,050 sq. ft. incl. all furnishings & equipment; 3 large exam rooms, consult & x-ray/lab rooms. No HMO patients. Contact Ann Barcome, Kohler HealthCare Consultants, Inc. 301-441-3740.

## **MEDICAL-SURGEON'S OFFICE TO SHARE**

Pikesville: office with private consultation room to sublease, full- or part-time; x-ray and lab available. Parking lot; near Metro stop & public transportation. 301-484-8066 except Tuesday.

## **OFFICE SPACE**

Available for sublet in the Pikesville area. Morning and afternoon hours available. Please contact 484-5238.

## **OFFICE SPACE FOR RENT**

Office available full or part-time in Towson. Convenient to Beltway. Call 296-6888 days.

## **MEDICAL OFFICE TO SHARE**

Baltimore/Pikesville office with three examination rooms. Full- or part-time. Free parking, near metro & public transportation. 301-486-2294.

# **OFFICE SPACE**

Available for rent in Federal Hill area and Washington Village area. Call Dr. Marc Posner, 752-5425.

## **OFFICE SPACE**

For sublet on Rte. 40 West. Fully furnished. Morning & afternoon hours available. Call 461-4455.

## **ENT EQUIPMENT FOR SALE**

Zeiss binocular operating microscope (floor model) (straight eyepiece). Sinus endoscope 4mm 30 degree - Elmed - (*Machida* attachment). Laryngoscope - fiberoptic *Machida*, flexible. *Machida* fiberoptic light generator Model 150A3. Madsen 331 Impedance audiometer. Beltone Model 12D pure tone audiometer. Instrument cabinet (blue). Treatment table & cabinet with suction & pressure (blue). Misc. ENT instruments. Complete inventory & price list available. Write: P.O. Box 4773, Timonium, MD 21093.

## **Hotline Numbers for Impaired Professionals**

Physicians — 727-0120  
Dentists — 964-2275  
Attorneys — 685-7878  
Pharmacists — 727-0746

Emergency Psychiatric  
Beds 800-492-0610

We invite your comments  
as well as scientific articles.  
Write:

Letters to the Editor & Commentary  
*MMJ*, 1211 Cathedral St.  
Baltimore, MD 21201-5585

# **MMJ**

## **Classified Advertising**

*Med Chi* Members:  
\$5 per line per insertion

Nonmembers:  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items will be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment.

## **OFFICE LABORATORY**

Abbott "Visions" Lab Analyser. Two years old. Excellent condition. Easy to use. \$5500. Call 301-889-3700 for details.

**Physicians' Quality Assurance Board Actions**  
appear regularly in *MMJ*

Area meetings and course announcements are listed each month under **Doctors Note**

## ☐ Maryland Advertisers ☐

To advertise in *MMJ* call:  
Network Publications  
301-235-0500

## ★★★ For a Special Evening ★★★

Begin or end a truly special evening in the elegant atmosphere of *Med Chi*'s historic Kraus Memorial Reading Room,  
1 1/2 blocks from the Lyric.

Available for catered functions every day.  
Please call Ralph Tyksinski at 301-539-0872  
for information.

## **SAINT JOSEPH HOSPITAL**

### **HOSPITAL PEDIATRICIANS**

Positions available for full-time and part-time hospital based pediatricians. Salary and benefits are competitive.

Contact: William F. DeVoe, M.D.  
Head, Department of Pediatrics  
Saint Joseph Hospital  
7620 York Road  
Baltimore, MD 21204  
337-1113



**SmithKline Beecham**  
*Clinical Laboratories*

# What's new in the clinical laboratory business?

SmithKline Beecham Clinical Laboratories has opened a 40,000 sq. ft. laboratory to support the Baltimore/Washington medical community in

**Owings Mills, Maryland.**



**SmithKline Beecham**  
*Clinical Laboratories*

11425 Cronhill Drive  
Owings Mills, MD 21117

(301) 581-2400

*Tell Me  
More About  
SmithKline  
Beecham's  
New Laboratory  
in  
Owings Mills,  
Maryland*

☐ I am interested in a FREE special introductory offer.

☐ Please provide me with more information on SBCL services and how they can meet my laboratory testing needs.

☐ I would like to talk to a SBCL representative.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ St. \_\_\_\_\_ Zip \_\_\_\_\_

Telephone Number \_\_\_\_\_





193rd Annual Meeting  
Medical & Chirurgical Faculty  
of Maryland

***American Medicine Today:  
Perspectives from  
Maryland***

Wednesday, May 8 - Saturday, May 11, 1991  
at University of Maryland  
University College  
Center of Adult Education  
College Park.

*mark your calendar!*

For more information, call  
301-539-0872 or toll free  
1-800-492-1056.





## The choices you make now may make all the difference later.

The decisions you make in a crisis will have a lasting impact on your patient's health. In the same way, the medical malpractice insurer you choose now may make all the difference to your professional and financial well-being in the years ahead.

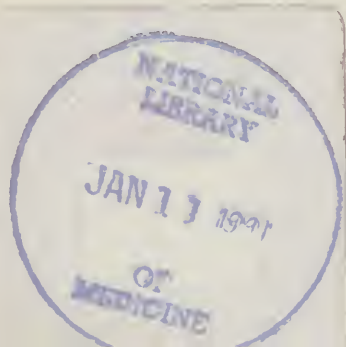
When you choose Princeton, you're choosing a company with a solid track record. A company with years of experience providing professional liability insurance for physicians, and a history of successfully defending policyholders against meritless claims.

You're also choosing a company that's flexible enough to design policies that meet your individual coverage needs. Our innovative

*Occurrence Plus* policy, for example, combines the best features of standard occurrence and claims-made and offers you the broadest insurance protection available.

And coverage is only half the story. Princeton has seasoned specialists working on your behalf -- so service is prompt and professional. Plus, our team of risk management consultants is ready to answer your questions, or arrange on-site educational programs.

Whether it's your patient's future, or your own, that's on the line, making the right choices is critical. Choose the insurer that offers experience, flexibility and service. Choose Princeton. Call your independent insurance agent today.



**Princeton Insurance Company**

4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900

NATIONAL LIBRARY OF MEDICINE



NLM 00792553 6



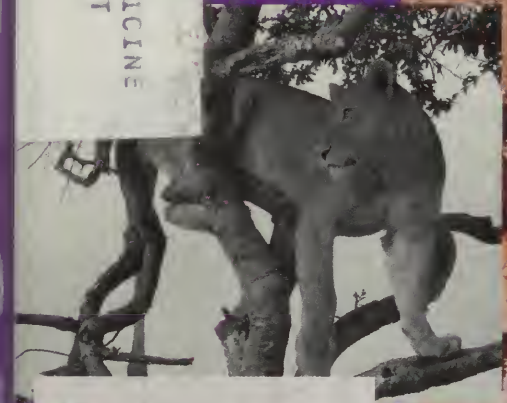
NO. 2 1991  
11-----SEQ: SP0054434  
MARYLAND MEDICAL JOURNAL

# MMJ

Maryland Medical Journal  
FEBRUARY 1991



3  
NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA MD 20894



NATIONAL LIBRARY  
JAN 30 1991  
OF MEDICINE



## Past Med Chi Photo Contest Winners

Join the Ranks! Enter a photo this year. Contest details on page 148.

Endorsed by Med Chi  
for Maryland Physicians

© 1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.

# Our Members Are Not Dying For A Free Tail.

Strangely enough, some companies are trying to sell Maryland physicians a professional liability policy that requires them to die or become permanently disabled in order to get a free tail. At Medical Mutual, our members can get a free tail while they are very much alive.

We make the tail available at no extra cost for those of you who are planning to retire from the practice of medicine after five consecutive years on our claims made and/or occurrence policy. If retirement is not in your plans, our tail is free at any age after 15 consecutive years on our claims made policy. As an added feature, you may step down from a higher rated specialty to a lower rated one with no tail charge for making the change.

Your broker or our Member Services Representatives can answer your questions about tail provisions for Medical Mutual members.

Of course, we also give a free tail in the event of your permanent disability or death.

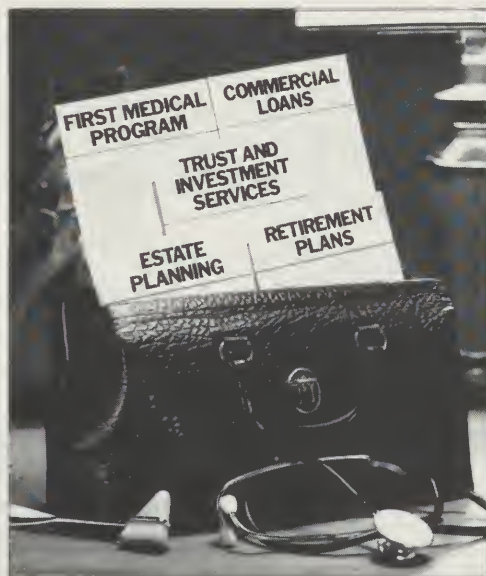
We just don't think this should be your only choice.



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# We provide "proper treatment" for every physician.

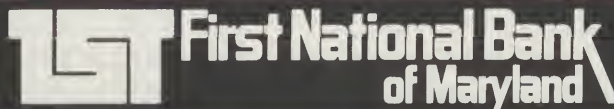


At First National Bank of Maryland, we know that time is extremely valuable to a physician. That's why we have made a major commitment to take care of **all** your financial needs with speed... accuracy... and a high level of personal service.

As part of our First Medical Program, we offer you a comprehensive package of customized services designed to satisfy your professional... and personal... financial requirements. Plus an experienced business banker who will work closely with you at your home or office.

To arrange for a confidential consultation, contact the First National Bank of Maryland office nearest you today. You'll find out we give you the treatment you deserve.

**Exceeding the Expected.**



Member FDIC/Federal Reserve System

**Allegany:** 777-4600/**Anne Arundel:** 280-5730/**Baltimore:** 832-7862/**Baltimore City:** 244-4092  
**Lower Eastern Shore:** 548-7200/**Upper Eastern Shore:** 479-3130/**Frederick:** 698-7850  
**Harford:** 836-5700/**Howard/Carroll:** 964-6810/**Montgomery:** 840-6300  
**Prince George's:** 952-5600/**Washington:** 790-6800



## Making the right choices means asking the right questions.

know the questions to ask your insurance agent. Questions that will provide the information you need to make an informed decision about medical treatment.

When it comes to choosing a medical practice insurer, knowing which questions to ask--and how to interpret the answers--is no less important. Because your treatment decisions may have a lasting impact on your patient's long-term health, your choice of insurer may make all the difference to your professional and financial well-being in the years ahead.

In an uncertain medical situation, you should consult a specialist. When you're making decisions about insurance, why not consult with an insurance specialist? An expert who can suggest which

questions to ask, guide you through the technical jargon, and help you select the coverage that's right for you.

That's where Princeton's network of independent insurance agents comes in. Our agents understand the insurance needs of health care professionals. They'll show you how to compare costs and benefits, and help you avoid gaps or duplications in coverage.

Do ask an agent why Princeton should be your choice. Ask about our financial strength, about our claims management philosophy that vigorously defends physicians against meritless claims...and about our new office package policy that offers protection for your practice and premises. We think you'll like the answers.



**Princeton Insurance Company**

4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900

### Princeton's Maryland Agents

Mr. Bruce White  
Beall, Garner, Screen & Geare  
Cumberland, MD (301) 722-2500

Ross Cohen  
Harry Cohen Insurance Agency, Inc.  
Baltimore, MD (301) 366-3030

Bob G. Urch, Jr.  
Comprehensive Risk Management  
Timonium, MD (301) 560-2424

Scott Becker  
Consolidated Insurance  
Baltimore, MD (301) 944-9550

Israel Teitelbaum  
Contemporary Insurance Services  
Washington, D.C. (202) 887-5563

Bill Baird  
Corroon & Black, Stump, Harvey, Cook  
Hunt Valley, MD (301) 527-1200  
Bethesda, MD (301) 951-3300

Byrl Hendler  
Diversified Insurance Industries  
Baltimore, MD (301) 433-3000

William C. Garrett  
William C. Garrett & Associates  
Towson, MD (800) 458-7295

Denise Dortch  
The Harjes Agency  
Hunt Valley, MD (301) 785-6161

Paul Snodgrass  
Ralph W. Lee & Company  
McLean, VA (703) 556-8787

Mitch Diamond  
Medical Liability Agency, Inc.  
Towson, MD (301) 494-1206

John Harris  
Med Net Financial  
Bethesda, MD (301) 961-8861

Korky Onal  
Onal's Insurance Agency  
Linthicum, MD (301) 859-1990

Mike Reese  
Reese, Yeatman & Associates, Inc.  
Bethesda, MD (301) 657-9490

Michael Gardner  
Wright-Gardner Insurance, Inc.  
Hagerstown, MD (301) 733-1234



# MMJ

## Maryland Medical Journal

FEBRUARY 1991

VOLUME 40 NO 2

### ARTICLES

Dr. Handwerger's in-depth and thorough treatise on the utilization of blood tests in the diagnosis of connective tissue diseases offers an excellent preview of the March issue which will focus on the Department of Medicine of the University of Maryland School of Medicine.

#### **Blood Tests in the Diagnosis of Connective Tissue Diseases . . . . . 97**

*Barry S. Handwerger MD*

Obtaining a complete rheumatological and medical history, performing a thorough physical examination, and carefully evaluating the laboratory data are all absolutely essential in making a diagnosis of connective tissue disease.

#### **Maryland's Cytology Labs: 1989-90 Proficiency Testing Results . . . . . 107**

*John M. DeBoy DrPH and Barbara R. Jarboe CT (ASCP, IAC)*

In 1990, the Department of Health and Mental Hygiene provided proficiency testing to 73 cytology laboratories, and 293 technical employees. Sixty-three of these labs, 132 of 154 pathologists, and 130 of 139 cytotechnologists passed without having to undergo retesting or retraining. Failing laboratories accounted for approximately 2 percent of the cervicovaginal slides diagnosed in 1989. Labs with the lowest passing rates were small ones operated by single pathologists not employing cytotechnologists. Eight pathologists either surrendered their state permit or were required to obtain additional training; no cytotechnologist required additional training.

#### **Magnetic Resonance Imaging Diagnosis of an Intracranial Metastasis of Adenocarcinoma of the Prostate: Case Report . . . . . 113**

*Paul R. Capito MD, Henry Wang MD, Henry Brem MD, Hyo S. Ahn MD, and R. Nick Bryan MD, PhD*

Adenocarcinoma of the prostate is the second most common cancer of American males over age 50. However, the reported instances of cerebral metastases have been exceedingly rare and are usually diagnosed at postmortem. This report describes an unusual case of brain metastasis from an occult adenocarcinoma of the prostate confirmed by craniotomy and tumor resection.

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

### Advisory Member

Carmine M. Valente PhD

### Art Director

Virginia Carter

### Graphic Assistant

Valentia McVey

### Communications Assistant

Lori Robinson

### Executive Director

Angelo J. Troisi FACHE

Communications Director

Michelle Burke MHSA

Maryland Advertising  
Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

Copyright © 1990. MMJ Vol 40, No 2. The *Maryland Medical Journal* USPS 332080. ISSN 0025-4363 is published monthly by the Medical and Chirurgical Faculty of Maryland and is a membership benefit. Subscription rates: U.S. and U.S. possessions, one year: nonmembers \$35; foreign \$42. Single copy: members \$5; nonmembers \$7. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: send address changes to *Maryland Medical Journal*, 1211 Cathedral St., Baltimore, MD 21201-5585. FAX 301-547-0915.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.



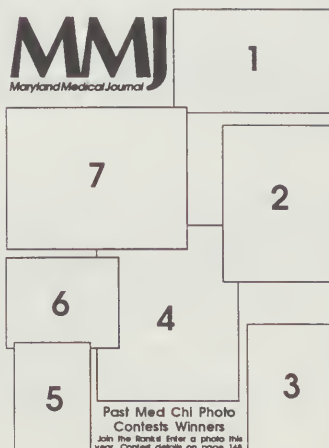
Medical  
and Chirurgical Faculty  
of Maryland

## DEPARTMENTS

Epidemiology and Disease Control Program . . . . .	81
<i>Gastroenteritis...</i>	
Maryland Oncology Newsletter . . . . .	87
<i>Adenocarcinoma of the lower rectum...</i>	
Executive Director's Newsletter . . . . .	91
A Clinical Moment with...Diabetes . . . . .	95
<i>Hypoglycemic reactions...</i>	
Quality Practice Digest . . . . .	117
<i>The Omnibus Budget Reconciliation Act of 1990...</i>	
Board of Physician Quality Assurance . . . . .	123

## MISCELLANY

Special Announcement . . . . .	96A
<i>SuperPRO contract...</i>	
Editorial . . . . .	136
<i>The Patient's Advocate...</i>	
Letters to the Editor . . . . .	137
<i>Medical advertising: Lyme disease...</i>	
Members in the News . . . . .	141
<i>Laughlin; Giargiana, Jr. ...</i>	
Doctors Note . . . . .	142
Classified Ads . . . . .	146
Information for Authors . . . . .	147



Cover: For the past ten years Med Chi physicians and auxiliary members have celebrated their photographic talents via Med Chi's annual photo contest. This month's cover features several photographs by various member physicians who have won photo contest awards in past years. These physician photo-graphers are: 1. Michael Liteanu MD (1st place color, 1988); 2. & 5. Jerrold M. Post MD (1st & 2nd place color, 1989; 2nd place color, 1988 & 1987); 3. & 4. David A. Paul MD (3rd place, 1990; 1st place black & white, 1989); 6. Lawrence Rubin MD (1st place black & white, 1987) 7. A.H. Oleynick MD (1st & 2nd place 1990). For details on

Med Chi's eleventh annual photo contest, see page 148.

Cover design by Virginia Carter.



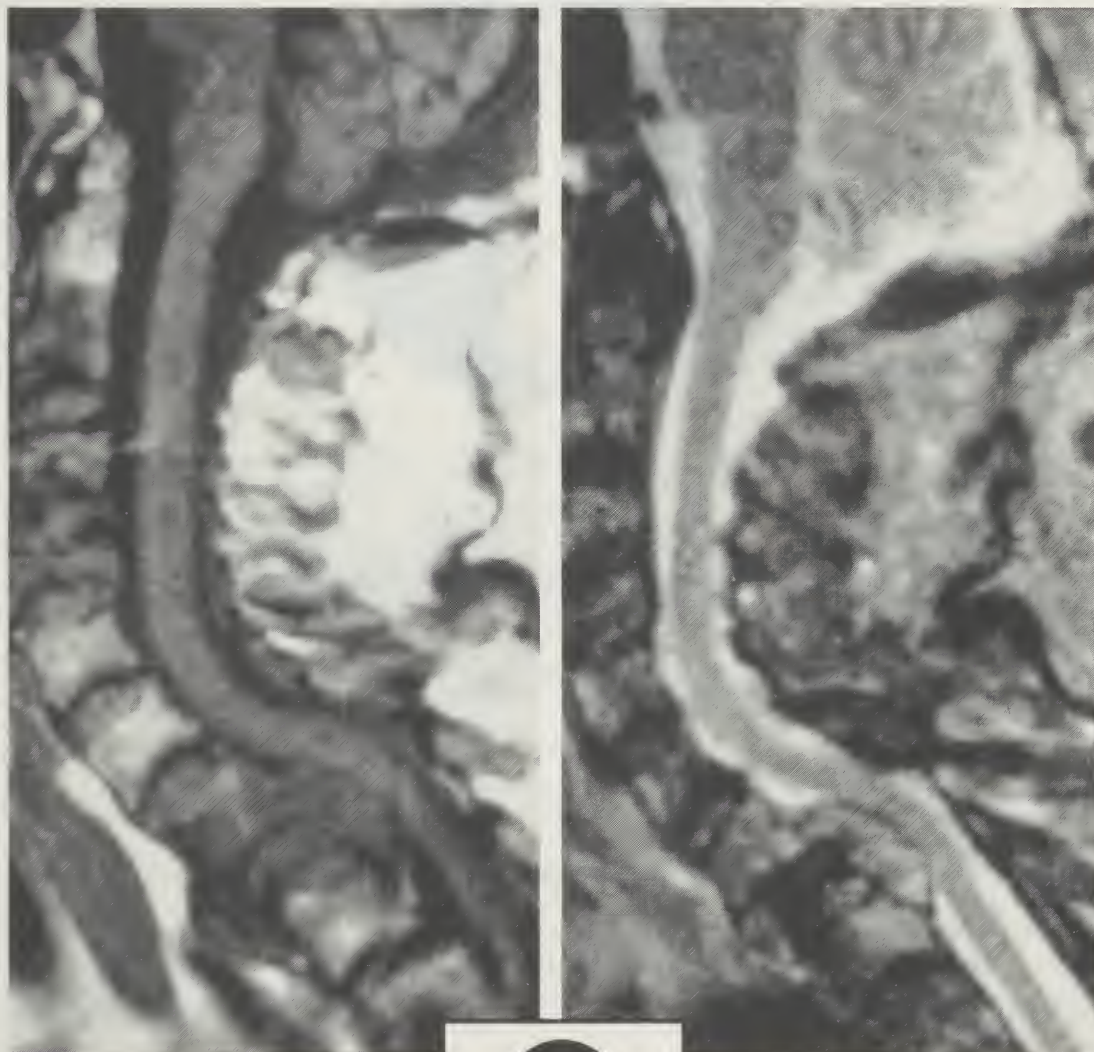
# Our Pictures Are Worth A Thousand Words.™

## Case #13

69 year old female complaining of severe pain in the neck and both arms with no known past medical problems.

**DIAGNOSIS: EPIDURAL METASTATIC MASS originating from the C7 vertebral body protruding into the spinal canal and compressing the spinal cord.**

The sagittal T1 and T2 weighted images in this elderly patient demonstrate spondylosis and exaggerated spinal curvature. Both images demonstrate abnormal signal within the C2, C3, C4 and C7 vertebral bodies (decreased on T1 and increased on T2). A soft tissue mass, contiguous with the C7 vertebral body, protrudes posteriorly into the spinal canal, effacing the subarachnoid space and causing definite compression of the spinal cord. Spinal cord compression is easily demonstrated by sagittal and axial MRI. In many cases, the etiology can be differentiated as to herniated disc, spondylotic bar, metastatic disease, lymphoma, etc. In this particular patient there is further compromise of the spinal canal by spondylotic hypertrophy of the facets at the C7-T1 level.



At Drs. Copeland, Hyman & Shackman, P.A. we are proud of our high resolution, state-of-the-art imaging. We look forward to consulting with you on any diagnostic imaging procedure in order to best serve you and your patients in the most expeditious and economic manner.



We provide convenient evening and weekend hours at both MRI locations, double-readings for quality assurance, and FAX capabilities for delivering reports immediately.

**You work hard to gain your patients' trust and confidence. At Drs. Copeland, Hyman & Shackman, we'll help you keep it.**

### Drs. Copeland, Hyman & Shackman P.A.

MRI Examinations available at:

Pomona Square Suite 119	White Square Imaging Center
1700 Reisterstown Rd.	9105 Franklin Square Drive
(301) 486-8830	(301) 574-8880

# DIAGNOSTIC ASSAY SERVICES



## **Specialties include:**

*Fertility Testing*

*Esoteric Steroid & Endocrine Testing*

*Infectious Disease Testing*

*Complete Allergy Testing*

**9290 Gaither Road  
Gaithersburg, MD 20877**

**D.C. Area 840-9220  
Toll Free - Nationwide - 800-638-4000**





# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

## February 1991

### Gastroenteritis: Causative Pathogens, Specimen Collection and, Traveler's Diarrhea

The following information is abstracted from Recommendations for Collection of Laboratory Specimens Associated with Outbreaks of Gastroenteritis (MMWR 1990; 39[No RR-14]:1-12).

#### I. Pathogens of Diarrhea

##### A. Viruses

Table 1 summarizes information relevant to outbreaks of viral gastroenteritis. Non-bloody diarrhea is frequently seen and vomiting, fever, and abdominal cramps are also common symptoms. All are most likely spread by fecal-oral transmission, usually person-to-person but sometimes through food or

**TABLE 1. Information relevant to outbreaks of viral gastroenteritis**

Causative agent	Patient age groupings	Selected symptoms*		Incubation period	Duration of illness	Mode of transmission
		Vomiting	Fever			
Astrovirus	young children and elderly people	occasional	occasional	1-4 days	2-3 days; occasionally 1-14 days	food, water, fecal-oral
Calicivirus	infants, young children, and adults	common for infants; variable for adults	occasional	1-3 days	1-3 days	food, water, nosocomial, fecal-oral
Enteric adenovirus	young children	common	common	7-8 days	8-12 days	nosocomial, fecal-oral
Norwalk virus	older children and adults	common	rare or mild	18-48 hours	12-48 hours	food, water, PTP, <sup>†</sup> ?air, fecal-oral
Rotavirus, group A	infants and toddlers	common	common	1-3 days	5-7 days	water, PTP, ?food, ?air, nosocomial, fecal-oral
Rotavirus, group B	children and adults	variable	rare	56 hours (average)	3-7 days	water, PTP, fecal-oral
Rotavirus, group C	infants, children, and adults	unknown	unknown	24-48 hours	3-7 days	fecal-oral

\*Diarrhea is common and is usually loose, watery, and non-bloody when associated with gastroenteritis.

<sup>†</sup>PTP = person-to-person.

? = not confirmed.

water. Incubation periods are characteristically short (1-2 days) except for enteric adenovirus which can have an incubation period of 7-8 days. Most patients shed these viruses in the greatest amounts during the acute phase of illness and up to 48-72 hours post recovery.

## B. Bacteria

Many different bacteria cause outbreaks of diarrhea (Table 2). The cause of illness can be hypothesized based on the symptoms and their severity, the suspected incubation period and the duration of illness. A patient may name a possible source that is incompatible with the symptoms and incubation period. Only by interviewing the patient in

detail about all exposures to food, others with similar illness, pets, travel, etc. for an entire incubation period can possible source(s) be determined.

The recent identification of new strains of *Escherichia coli* suggests that this pathogen may be a more important cause of diarrheal illness than was previously recognized. Diarrheagenic *E. coli* are currently categorized into four groups: enterotoxigenic, enteropathogenic, enteroinvasive and enterohemorrhagic *E. coli* (EHEC). EHEC (of which *E. coli* O157:H7 is the prototype) is frequently reported in this country. *E. coli* O157:H7 is now known to be the major cause of hemolytic uremic syndrome in the US.

TABLE 2. Information relevant to outbreaks of bacterial gastroenteritis

Causative agent	Patient age groupings	Selected symptoms			Incubation period	Duration of illness	Mode of transmission
		Vomiting	Fever	Diarrhea			
<i>Bacillus cereus</i> and <i>Staphylococcus aureus</i>	all	common	rare	usually not prominent	1-6 hours	<24 hours	food
<i>Campylobacter jejuni</i>	all groups, especially <1 year old and young adults	variable	variable	may be dysenteric	3-5 days (1-7 days)	1-4 days, occasionally >10 days	food, water, pets, fecal-oral
Enterotoxigenic <i>Escherichia coli</i>	adults, infants, children	occasional	variable	watery to profuse watery	12-72 hours	3-5 days	food, water, PTP,* fecal-oral
Enteropathogenic <i>Escherichia coli</i>	infants	variable	variable	watery to profuse watery	2-6 days	1-3 weeks	food, water, PTP, fecal-oral
Enteroinvasive <i>Escherichia coli</i>	adults	occasional	common	may be dysenteric	2-3 days	1-2 weeks	food, water, PTP, fecal-oral
Enterohemorrhagic <i>Escherichia coli</i>	<10 years (50%), 15 months-73 years	common	rare or mild	first watery, then grossly bloody	3-5 days	7-10 days (1-12 days)	food, PTP, fecal-oral
<i>Salmonella</i>	all groups, especially infants and young children	occasional	common	loose, watery, occasionally bloody	8-48 hours	3-5 days	food, water, fecal-oral
<i>Shigella</i>	all groups, especially 6 months-10 years	occasional	common	may be dysenteric	1-7 days	4-7 days	food, water, PTP, fecal-oral
<i>Yersinia enterocolitica</i>	all groups, especially older children and young adults	occasional	common	mucoid, occasionally bloody	2-7 days	1 day-3 weeks (average 9 days)	food, water, PTP, pets, fecal-oral
<i>Vibrio cholerae</i>	all groups	common	variable	may be profuse and watery	9-72 hours	3-4 days	fecal-oral, food, water

\*PTP = person-to-person.



Cattle appear to be a common reservoir for this organism.

### C. Parasites

In general, the incubation period, duration of illness, and period of pathogen excretion are usually longer in association with diarrheal infection caused by parasites than with diarrhea caused by viruses or bacteria.

Table 3 shows information relevant to parasites that commonly cause gastroenteritis.

## II. Specimen Collection

### Diarrhea in Travelers

The following information is a summary of an article by Timothy Holtz, M.P.H., and Mary D. Nettleman, M.D.: "Emporiatrics: Diarrhea in Travelers" which appeared in *Infection Control and Hospital Epidemiology* 1990;11:606-610.

#### Epidemiology:

The attack rate for short-term travelers is 30-40%--more frequent in neophytes to international travel, young adults, those traveling under primitive conditions, and those with prior gastrointestinal disorders.

#### Etiology:

No pathogen has been identified in 50-70% of cases. Of the known pathogens, bacteria are most frequent. Mixed infection is common. Pathogens include *E. coli*, *Salmonella*, *Shigella*, *Campylobacter*, *Vibrio*, *Aeromonas hydrophila*, *Plesiomonas*, rotavirus, and other viruses. *Entamoeba histolytica*, *Giardia*, and other parasites including helminths are possible. Non-infectious causes are also possible.

#### Symptoms:

In addition to diarrhea, symptoms include, cramps (73%), vomiting (18%), and fever (15%). An average of 4.6 stools/day are experienced by persons with diarrhea; 11% show blood in their stool.

#### Precautions:

Although the majority of travelers will have only a few days of symptoms and then recover completely, travelers should follow food and

Table 4 shows general information for collection of stool specimens. These instructions were primarily intended for public health agencies that collaborate with the Centers for Disease Control in investigating outbreaks of gastroenteritis and, therefore, the number of specimens to collect and the type of collection medium may vary for the individual practitioner. Please consult with your reference laboratory for the tests available, and the type of specimens required. Report confirmed or suspected outbreaks to your local health department.

water precautions below. In general, "boil it, cook it, peel it, or forget it:"

- \* **AVOID** tap water, food washed with tap water, food at room temperature, uncarbonated bottled water, ice, leafy vegetables and salads, fruits that can't be peeled, dairy products, sandwiches with mixed fillings, sauces, dressings, raw oysters, and undercooked meat and seafood.

#### Treatment and prophylaxis:

Strong consideration should be given to allowing the adult traveler to carry antibiotics with instructions to **begin taking if diarrhea occurs:**

- \* trimethoprim/sulfamethoxazole (160/800 mg twice daily for 3 days), or
- \* ciprofloxacin (500 mg twice daily for 5 days), or
- \* norfloxacin (400 mg twice daily for 3 days), and

also start an antimotility agent (such as loperamide).

Patients with bloody diarrhea, severe abdominal pain, shaking chills, or significant fever, or when diarrhea lasts more than 3 days or results in dehydration, however, should seek medical attention.

**Prophylaxis** has been shown to effectively prevent traveler's diarrhea but might be reserved for the traveler who will stay only a few days and to whom even a few hours of diarrhea might be extremely disadvantageous.

TABLE 3. Information relevant to outbreaks of parasitic gastroenteritis

Causative agent	Patient age groupings	Selected symptoms			Incubation period	Duration of illness	Mode of transmission
		Fever	Diarrhea	Abdominal			
<i>Balantidium coli</i>	unknown	rare	occasional mucous or blood	mild to severe pain	unknown	unknown	food, water, fecal-oral
<i>Cryptosporidium</i>	children, adults with AIDS	occasional	profuse, watery	occasional cramping	1-2 weeks	4 days-3 weeks	food, water, PTP,* pets, fecal-oral
<i>Entamoeba histolytica</i>	all groups, adults	variable	occasional mucous or blood	colicky pain	2-4 weeks	weeks-months	food, water, fecal-oral
<i>Giardia lamblia</i>	all groups, children	rare	loose, pale, greasy stools	cramps, bloating, flatulence	5-25 days	1-2 weeks to months and years	food, water, fecal-oral
<i>Isospora belli</i>	adults with AIDS	unknown	loose stools	unknown	9-15 days	2-3 weeks	fecal-oral

\*PTP = person-to-person.

TABLE 4. General instructions for collection of stool specimens

Instructions for collecting specimens	Type of agent to be tested for		
	Virus	Bacterium	Parasite
When to collect	Within 48-72 hours after onset of illness.	During period of active diarrhea (preferably as soon after onset of illness as possible).	Any time after onset of illness (preferably as soon after onset of illness as possible).
How much to collect	As much stool sample from each of 10 ill persons as possible (at least 10 cc each person); samples from 10 controls may also be submitted.	Two rectal swabs or swabs of fresh stool from each of 10 ill persons; samples from 10 controls may also be submitted.	A fresh stool sample from each of 10 ill persons; samples from 10 controls may also be submitted.
Method of collection	Place fresh stool specimens (liquid preferable), unmixed with urine, in clean, dry containers, (e.g., urine specimen cups).	For rectal swabs, moisten each of two swabs in Cary-Blair medium first, then insert sequentially 1-1.5 inches in rectum and gently rotate. Place both swabs into the same Cary-Blair medium tube. Break off top portions of swab sticks and discard.	Collect a bulk stool specimen, unmixed with urine, in a clean container. Place a portion of each stool sample into 10% formalin and polyvinyl alcohol preservatives at a ratio of 1 part stool to 3 parts preservative. Mix well.
Storage of specimen after collection	Immediately refrigerate at 4 C. DO NOT FREEZE if electron microscopy is anticipated.	Immediately refrigerate at 4 C if testing is to be done within 48 hours after collection; otherwise, freeze samples at -70 C.	Store at room temperature, or refrigerate at 4 C. DO NOT FREEZE.
Transportation	Keep refrigerated. Place bagged and sealed specimens on ice or with frozen refrigerant packs in an insulated box. Send by overnight mail. DO NOT FREEZE.	Refrigerate as directed for viral specimens. For frozen samples: place bagged and sealed samples on dry ice. Mail in insulated box by overnight mail.	Refrigerate as directed for viral specimens. For room-temperature samples: mail in water-proof containers. DO NOT FREEZE.



# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS™ MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

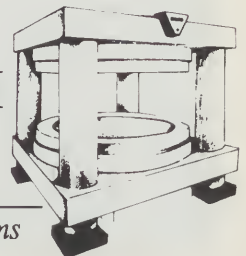
At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



**GREATER BALTIMORE  
MRI CENTER, INC.**

Not affiliated with the Greater Baltimore Medical Center.

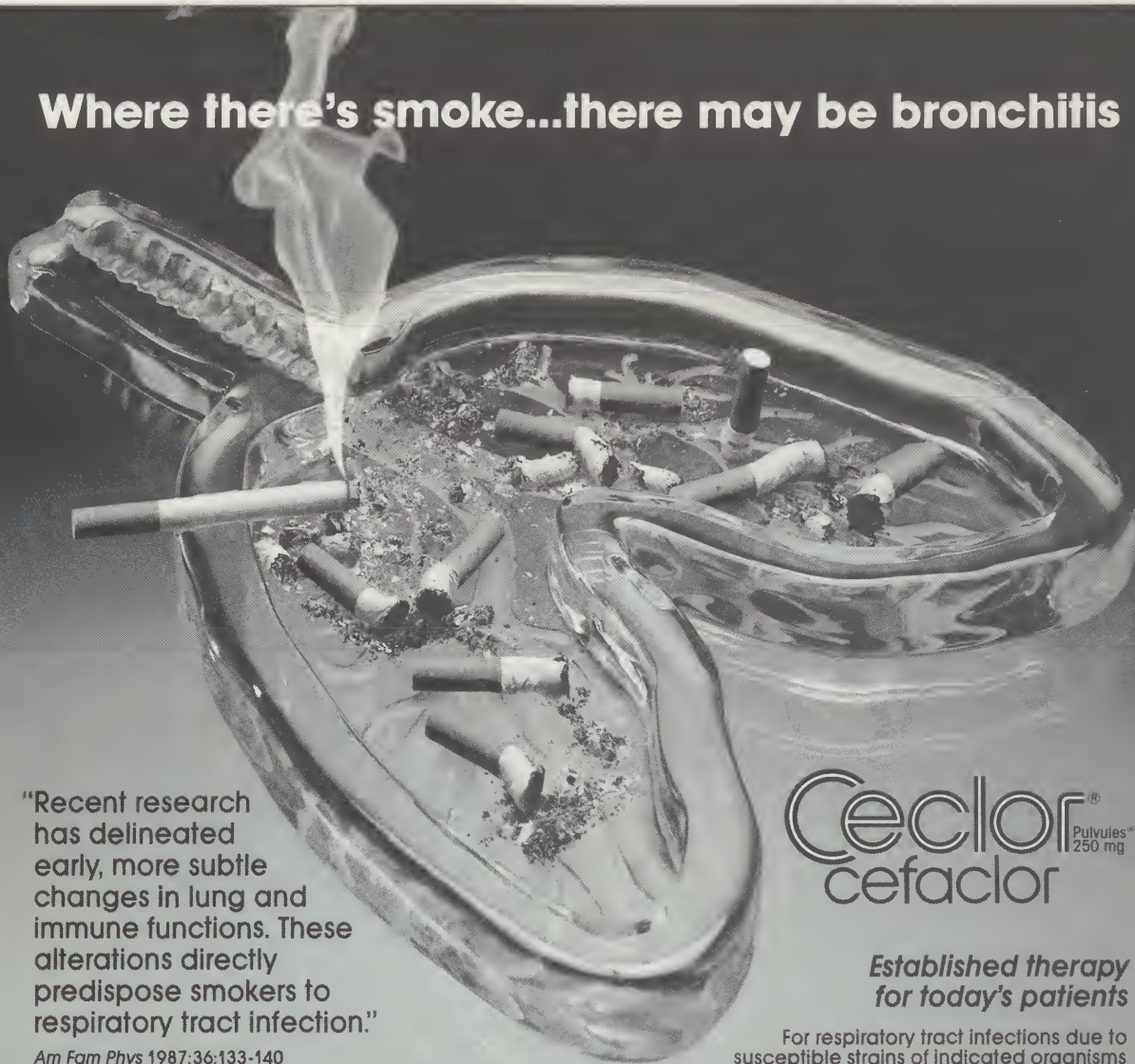
110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



# Where there's smoke...there may be bronchitis



"Recent research has delineated early, more subtle changes in lung and immune functions. These alterations directly predispose smokers to respiratory tract infection."

*Am Fam Phys* 1987;36:133-140

**Ceclor**<sup>®</sup>  
Pulvules<sup>®</sup> 250 mg  
**cefactor**

**Established therapy  
for today's patients**

For respiratory tract infections due to  
susceptible strains of indicated organisms

#### Brief Summary.

Consult the package literature for prescribing information.  
**Indication:** Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A  $\beta$ -hemolytic streptococci).

**Contraindication:** Known allergy to cephalosporins.  
**Warnings:** CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

#### Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

#### Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonía, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

#### Abnormalities in laboratory results of uncertain etiology:

- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest<sup>®</sup> tablets but not with Tes-Tape<sup>®</sup> (glucose enzymatic test strip, Lilly).

PA 8791 AMP [021490LRI]  
Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.



Eli Lilly Industries, Inc.  
Carolina, Puerto Rico 00630  
A Subsidiary of Eli Lilly and Company  
Indianapolis, Indiana 46285

CR-0525-B-049333 © 1990, ELI LILLY AND COMPANY



## Conservative Treatment of Adenocarcinoma of the Lower Rectum

It is estimated that 45,000 new cases of adenocarcinoma of the rectum are diagnosed in the U.S. each year, and that almost 17,500 will be initially diagnosed as stage I (inside the bowel wall) or stage II disease (through the bowel wall). Although early detection carries better survival, many patients are fearful of surgical management because of the associated morbidity and mortality. Most of these carcinomas, especially of the middle and lower rectum, require abdominoperineal resection (APR) with permanent colostomy, an operation that carries a mortality rate of about 4 percent. In addition, this operation is associated with a 5 to 20 percent rate of impotence and urologic dysfunction. The overall local failure rate of APR for all stages of the disease can be as high as 32 percent.<sup>1</sup>

While several studies are being conducted to lower local recurrences and improve the survival of patients with Dukes' B (Astler Collier B<sub>2</sub>) and C, i.e., stage II and III disease, others are considering conservative approaches to eliminate the need for APR in selected cases, especially in patients with Dukes' A (Astler Collier's A+B<sub>1</sub>), i.e., stage I. Four such conservative methods have been used; some are not new and can be traced back over five decades. The experiences thus far have been encouraging and have demonstrated that certain rectal cancers can be conservatively managed in selected situations.<sup>2</sup>

**Fulguration and Electrocoagulation:** These methods destroy the tumor locally either by heat from a probe inserted into the tumor or by a sparking wire loop that cauterizes the tumor by layers. While several reports claim satisfactory results in selected cases, several disadvantages must be noted. These include imprecise control of the tissues destroyed and lack of pathological assessment of tumor invasion. Without such prognostic information, comparison with other surgical methods is impossible. Furthermore, moderate to severe complications, particularly rectal bleeding, have occurred in 8 to 28 percent of the patients so treated, with local recurrence rates of 12 to 60 percent.<sup>3-7</sup>

**Laser Therapy:** This approach will probably give results similar to those of electrocoagulation. It has controlled low grade of penetration and fulguration which makes it safe to utilize, not only in rectal cancers, but also in colonic lesions.

**Endocavitary Radiation:** During the last decade, endocavitary radiation has become an acceptable method of therapy for clinically T<sub>1</sub> and T<sub>2</sub> lesions (Dukes' A and B<sub>1</sub>). There is minimal morbidity and the procedure is performed on an outpatient basis. Papillon reported an absolute five-year survival rate of 78 percent<sup>8</sup> without recurrence. Again, such an approach does not allow for exact pathological staging of the disease, and makes evaluation of the results difficult.

**Local Surgical Excision:** Local excision of rectal carcinoma via a transanal approach in selected groups of patients has resulted in five-year survival rates ranging from 78 to 89 percent.<sup>9-15</sup> This survival is comparable to results achieved with radical surgery for a similar stage of the disease.<sup>16</sup> The size, pattern of growth, and cell differentiation of the primary tumor are important criteria for patient selection.<sup>17</sup> Exophytic, well-differentiated lesions less than 4 cm in diameter were shown to have a 12.5 percent incidence of positive perirectal lymph node involvement. On the other hand, ulcerated, invasive, well-differentiated lesions less than 4 cm had a 50 percent incidence of positive regional lymph nodes. Exophytic, moderately-differentiated lesions less than 4 cm in diameter had a 20 to 27 percent incidence of regional lymph node metastases; this is similar to the 21 percent local recurrence rate reported in selected patients treated by local excisions.<sup>2</sup>

**Local Excision and Postoperative Radiotherapy:** The success of conservative management of rectal cancers requires skilled clinical selection of patients with T<sub>1</sub> or T<sub>2</sub> lesions so that it can result in local control similar to that of radical surgery. The use of 5000 rads (50 Gy) of external beam radiotherapy after local excision of the rectal lesion has improved local control in such patients.<sup>18</sup> In seventeen patients who had their gross tumor removed (65 percent had positive margins and of these, 35 percent had positive deep margins) and received postoperative external irradiation, only one developed local recurrence for an incidence rate of 6 percent. To further improve these results, the addition of chemotherapy to postoperative irradiation has resulted in better local control and survival.<sup>19,20</sup> Furthermore, it has been shown that local failure can successfully be salvaged by radical resection,<sup>2</sup> and that pelvic nodal resections after radiation therapy are not complicated in previously undissected tissues.<sup>21</sup>

The Surgical Oncology Program and the University of Maryland Cancer Center have been involved in a national study for conservative treatment of adenocarcinoma of the distal rectum (CALGB 8984). Patients with T<sub>1</sub> or T<sub>2</sub> tumors located within 10 cm above the dentate line are candidates for such management. They will undergo computerized tomography scan and transrectal ultrasound scan of the pelvis which may add further objective information for the staging of their disease. The lesions will then be locally resected via a transanal approach. Those who are found to have positive margins will undergo radical resections. Those who are found to have negative margins will receive 50 Gy/28 fraction, and 5-Fluorouracil 500 mgm/m<sup>2</sup> on days one to three and twenty-nine to thirty-one. This is to be initiated within two weeks of the date of resection. Furthermore, the tumor will be

studied by flow cytometry and for DNA (S-phase) characteristics. All such data will be correlated to the survival.

## References

1. Adloff M, Arnand JP, Schloegel M, Thiband D. Factors influencing recurrence after abdominoperineal resection for cancer of the rectum. *Dis Colon Rectum* 1985;28:413-415.
2. Biggers OR, Beart RW, Jr., Ilstrup DM. Local excision of rectal cancer. *Dis Colon Rectum* 1986;29:374-377.
3. Eisenstat TE, Deak ST, Rubin RJ, Salvati EP, Greco RS. Five-year survival in patients with carcinoma of the rectum treated by electrocoagulation. *Am J Surg* 1982;143:127-131.
4. Jackman RJ. Conservative management of selected patients with carcinoma of the rectum. *Dis Colon Rectum* 1961;4:429-434.
5. Gingold BS, Mitty WF, Jr., Tadros M. Importance of patient selection in local treatment of carcinoma of the rectum. *Am J Surg* 1983;145:293-296.
6. Madden JL and Kandalaf S. Electrocoagulation in the treatment of cancer of the rectum. *Ann Surg* 1971;174:530-538.
7. Hockstra HJ, Verschueven TCJ, Oldhoff J, Ploeg EVD. Palliative and curative electrocoagulation for rectal cancer: Experience and results. *Cancer* 1985;55:210-213.
8. Papillon J. The responsibility of radiologists in the preservation of breast and rectum in cancer treatment. *Clin Radiol* 1986;37:303-309.
9. Mason AY. Malignant tumors of the rectum, Part II: Local excision. *Clin Gastroenterol* 1975;4(3):582-593.
10. Morson BC, Bussey HJR, Samoorian S. Policy of local excision for early cancer of the colorectum. *Gut* 1977;18:1045-1050.
11. Lock MR, Cairns DW, Ritchie JK, Lockhard-Mummery EE. The treatment of early colorectal cancer by local excision. *Br J Surg* 1978;65:346-349.
12. Hager T, Gall FP, Hermanek PA. Local excision of cancer of the rectum. *Dis Colon Rectum* 1983;26:149-151.
13. Grigg M, McDermott FT, Phil EA et al. Curative local excision in treatment of carcinoma of the rectum. *Dis Colon Rectum* 1984;27:81-83.
14. Stearns MW, Jr., Sternberg SS, DeCossé JJ. Treatment alternatives: Localized rectal cancer. *Cancer* 1984;54:2691-2694.
15. Williams NS, Durdey P, Johnston D. The outcome following sphincter-saving resection and abdominoperineal resection for low rectal cancer. *Br J Surg* 1985;72:595-598.
16. Pihl E, Hughes ESR, McDermott FT et al. Carcinoma of the rectum and rectosigmoid: Cancer specific long-term survival. A

series of 1061 cases treated by one surgeon. *Cancer* 1980;45:2902-2907.

17. Cohen AM, Wood WC, Gunderson LL, and Shinnar M. Pathological studies in rectal cancer. *Cancer* 1980;45:2965-2968.
18. Rich TA, Weiss DR, Mies C, Fitzgerald TJ, Chaffey JT. Sphincter preservation in patients with low rectal cancer treated with radiation therapy with or without local excision of fulguration. *Radiology* 1985;156:527-531.
19. Gastrointestinal tumor study group: Prolongation of the disease-free interval in surgically treated rectal cancer. *N Engl J Med* 1985;312:1465.
20. Krook J, Moertel C, Wieand H et al. Radiation versus sequential chemotherapy-radiation-chemotherapy (abstract). *Proc Am Soc Clin Onc* 1986;5:82.
21. Mayer M, Papillon J, Robin JY, Aridet JM. La lymphadenectomie mesenterique inferieure et perirectale dans le traitement conservateur des cancer de la partie inferieure de l'ampoule rectale. *Chirurgie* 1982;108:479-483.

### E. GEORGE ELIAS MD, PHD

Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland Medical System

### HOWARD L. PARNES MD

Assistant Professor of Medicine  
University of Maryland Cancer Center

*Tumor conferences are held weekly on Tuesday between 8 and 9 a.m. in Room S9A06 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call 301-328-5224 by noon Monday to be placed on the schedule. Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD.*

## PHYSICIANS

Do something different  
two days a month

Receive a commission  
in the Army National Guard

*The Army National Guard has immediate openings for physicians which require participation of only 2 days a month plus a 15-day Annual Training Period (a total of 39 days per year).*

### YOU WILL BE ELIGIBLE

- A COMMISSION IN THE ARMY NATIONAL GUARD
- AN EXCELLENT PART-TIME INCOME
- PAID ATTENDANCE AT:
  - CONTINUING MEDICAL EDUCATION COURSES
  - AMA CONFERENCES
  - KPUP (Active duty assignment up to 30 days in Europe, Asia and South America)
  - TRAINING AT U.S. ARMY HOSPITALS
- POST EXCHANGE & COMMISSARY
- MILITARY AIR TRAVEL WITHIN THE 50 STATES

### MARYLAND ARMY NATIONAL GUARD

PHIL HOWARD  
(301) 653-4618

610 Reisterstown Road, Pikesville, MD 21208



### Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of *Maryland Medical Journal*.

Fill out the form below and mail it to:

Wanda Griebel  
MMJ 1211 Cathedral Street  
Baltimore, MD 21201

#### Old Address

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_

#### New Address

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# *Catastrophic Illness is Rare and the Treatment is Critical.*

You know the patient. The one with chronic psychosis that hasn't responded to general inpatient care. The patient has comprehensive coverage so you've been able to admit him time and time again for inpatient care. But there's been little if any improvement, and you're frustrated. It's time to refer him to a hospital that is committed to treating the long term refractory patient and has the resources to do it. Sheppard Pratt.

Today's literature discourages long term hospitalization, and we agree. That same literature does, however acknowledge that a small group of chronic patients cannot be treated any other way. In 1984, Sheppard Pratt opened an 18 bed unit that treats only those types of patients.

We are not talking about custodial care nor do we treat patients who spend years talking about delusions. We provide long term, active, behavioral, psychopharmacological treatment for those patients who can genuinely be helped.

In addition to managing systematic and aggressive medication trials, our patients live within an established token economy. Patient education and social skills programming, and specialized activity therapy are provided daily throughout treatment. Formalized psychoeducation is also a vital component of treatment and family involvement. Comprehensive discharge planning is given attention equal to inpatient care. Sheppard Pratt provides many options for aftercare including a quarterway house, supervised housing, vocational training, outpatient therapy and medications management, and day hospitals.

Sheppard Pratt is a comprehensive network of psychiatric services. In addition to our 322 bed hospital we maintain the 16 bed Mt. Airy House, numerous community outreach programs and the National Center for Human Development. For more than 100 years, Sheppard Pratt has earned its reputation for providing quality care to the chronically ill patient. And during these difficult economic times, we remain loyal to that heritage.

For further information or to make a referral contact the Adult Admissions Office at:  
(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ *Sheppard Pratt*  
A not-for-profit health system



# ***OK, Doctor. Tell me where it hurts.***

Is your office management system giving you a pain? ***We can help!***  
Call and tell us your symptoms.

- ▲ "Patient billing and insurance forms take forever to get out!"
- ▲ "I looked in my checkbook and wondered where all the money had gone."
- ▲ "I don't know if I can meet the new Medicare requirements for billing, but I sure don't want to be fined!"
- ▲ "I'd hate to have my records subjected to a malpractice review right now."
- ▲ "My staff is buried in paperwork, but I can't afford to hire more people."
- ▲ "Our patient scheduling and recall system has fallen apart."
- ▲ "We got a computer to speed up our work, but the service we get is incredibly slow."

**CALL TOLL FREE, TODAY. 1 (800) 776-2454**

**P R I S M**  
MEDICAL SYSTEMS

Baltimore, MD  
(301) 494-0992

Fairfax, VA  
(703) 359-0777

Richmond, VA  
(804) 330-9225

Winchester, VA  
(703) 662-4545



effectively meet your needs as a Maryland physician, Med Chi must maintain an extensive framework of committees to uphold prior commitments, manage current programs, and formulate new policy. It is essential that these committees be comprised of interested members so that Med Chi will remain a strong, viable, and active organization.

Please indicate your willingness to serve by checking your committee preference and special interests on the reply card. Every effort will be made to appoint you to the committee of your choice.

We intend to appoint as many members as possible to committees to ensure Med Chi's continued growth as a leading voice for medicine in Maryland.

Thank you for your support.  
J. David Nagel MD  
President-elect

I am interested in serving on the following Med Chi committees:

- |  |   |
|--|---|
| <input type="checkbox"/> AIDS Committee                                    | <input type="checkbox"/> Mental Health Committee                            |
| <input type="checkbox"/> Alcoholism and Chemical Dependency Committee      | <input type="checkbox"/> Music Medicine Clearinghouse Committee             |
| <input type="checkbox"/> Computers in Medicine Committee                   | <input type="checkbox"/> Occupational Health Committee                      |
| <input type="checkbox"/> Continuing Medical Education Review Committee     | <input type="checkbox"/> Peer Review Committee                              |
| <input type="checkbox"/> Drugs Committee                                   | <input type="checkbox"/> Physician/Patient Relations Committee              |
| <input type="checkbox"/> Emergency Medical Services Committee              | <input type="checkbox"/> Physician Rehabilitation Committee                 |
| <input type="checkbox"/> Finance Committee                                 | <input type="checkbox"/> <i>Physician's Practice Digest</i> Editorial Board |
| <input type="checkbox"/> Hospital Medical Staffs Committee                 | <input type="checkbox"/> Professional Ethics Committee                      |
| <input type="checkbox"/> Insurance Fund of Med Chi Committee               | <input type="checkbox"/> PRO Monitoring Committee                           |
| <input type="checkbox"/> Legislative Committee                             | <input type="checkbox"/> Public Health Committee                            |
| <input type="checkbox"/> Liaison Committee with Medical Assistance Program | <input type="checkbox"/> Immunization and Infectious Diseases Subcommittee  |
| <input type="checkbox"/> Library and History Committee                     | <input type="checkbox"/> Infant, Child & Adolescent Health Subcommittee     |
| <input type="checkbox"/> Long Term Care and Geriatrics Committee           | <input type="checkbox"/> Maternal Welfare Subcommittee                      |
| <input type="checkbox"/> Managed Care and Third Party Liaison Committee    | <input type="checkbox"/> Sports Medicine Subcommittee                       |
| <input type="checkbox"/> <i>Maryland Medical Journal</i> Editorial Board   | <input type="checkbox"/> Public Relations Committee                         |
| <input type="checkbox"/> Medicine and Religion Committee                   | <input type="checkbox"/> Small Area Practice Variations Committee           |
| <input type="checkbox"/> Mediocolegal Committee                            | <input type="checkbox"/> Specialist Identification Committee                |
| <input type="checkbox"/> Other Interests: _____                            | <input type="checkbox"/> Specialty Societies Committee                      |
|  | <input type="checkbox"/> Young Physicians Committee                         |

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_ County: \_\_\_\_\_

**Place  
Stamp  
Here**

Medical and Chirurgical Faculty of Maryland  
1211 Cathedral Street  
Baltimore, Maryland 21201-5585



# Executive Director's Newsletter

February 1991

1991-1992  
Committee Selection  
Cards Attached

---

## Committee Selection Cards

---

Med Chi members interested in serving on a Med Chi committee during 1991-1992 should complete the committee selection card following this newsletter. All members should complete this card by March 31, 1991 in order to be considered for appointment to a Med Chi committee.

---

## 1991 Annual Meeting

---

"American Medicine Today, Perspectives from Maryland" is the theme for Med Chi's 193rd Annual Meeting to be held on Wednesday, May 8 thru Saturday, May 11, 1991 at the University of Maryland Center of Adult Education in College Park, Maryland. AMA President John C. Tupper MD has accepted Med Chi's invitation and will address the House of Delegates on May 8th. Med Chi has also invited Mrs. Marilyn Quayle and Senator John D. Rockefeller, IV (D-WV) to speak during the meeting. Mark your calendar, send in the pre-registration form sent with the January MMJ and watch future issues of the *Maryland Medical Journal* for more details about the meeting. To pre-register by phone or for additional information, call Michael Moran at 301-539-0872 or 1-800-492-1056.

---

## 1991 Med Chi Directory

---

Due to a computer error, the names of physicians from Montgomery and Worcester counties were inadvertently omitted from the combined alphabetical index to the 1991-1992 *Med Chi Membership Directory*. Med Chi has arranged with the printer to publish a corrected index for the *Directory* which will be distributed with a future issue of the MMJ. Other corrections to the *Directory* will be published along with the index. To update your *Directory* listing or to order an additional copy contact Wanda Griebel in the Finance Department at 301-539-0872 or 1-800-492-1056.

---

## Radiation Technologists Regulations

---

Emergency regulations governing radiation technologists and nuclear medical technologists became effective February 16, 1990, requiring physicians to use certified technologists for x-rays and other diagnostic and treatment procedures. The emergency regulations are a temporary measure to allow the State time to draft permanent regulations. The permanent version of these regulations have not been promulgated by the Board of Physician Quality Assurance (BPQA), and Med Chi has an opportunity to provide input before that occurs.

Since the emergency regulations went into effect, Med Chi has received numerous questions and comments from physicians regarding these regulations and their impact on private office practices. Most physicians are concerned that they may have to employ a certified radiation technologist to perform a relatively small number of routine procedures. The resulting cost could be a significant burden to small practices, especially those in rural areas.

When the Maryland General Assembly enacted legislation providing for the certification of radiation and nuclear medical technologists, it delegated to the BPQA the authority and responsibility for defining what constitutes the practice of "medical radiation technology" and "nuclear medical technology." The legislature also delegated responsibility for defining the qualifications for individuals to practice in this area.

After discussion with representatives of the BPQA, it has been determined

that revisions to these regulations may be appropriate. To assure that these procedures are conducted safely and effectively, Med Chi is proposing that these procedures be performed in accordance with procedures established by a supervising physician and by individuals who have undergone a course of instruction relevant to the specific procedures and who receive periodic proficiency testing.

Med Chi is drafting language for the Board's consideration that would exempt specific procedures from the requirement that a certified technologist be employed. To assist in this process, Med Chi has requested that each component and specialty society consult its members and provide input on what procedures could be performed safely and effectively without the use of certified technologists. Anyone wishing to submit information or to serve on an ad hoc committee, please call or write Stephen C. Buckingham, Esq., legal counsel for Med Chi, at 1211 Cathedral Street, Baltimore, MD 21201-5585, 301-539-0872 or 1-800-492-1056.

---

## *Maryland Medical Assistance Program Updates*

---

### *"Brand Medically Necessary" Prescriptions*

Effective November 26, 1990, the Maryland Medical Assistance Program no longer reimburses for "brand medically necessary" invoices submitted by tape. Only hard copy invoices are accepted for original and refill prescriptions for Medical Assistance and Pharmacy Assistance recipients. The specification of "brand medically necessary" and the justification for its use must be written on the original invoice form in the prescriber's own handwriting. Verification copies are not required to be submitted to the Medical Assistance Compliance Administration for services rendered on or after November 26, 1990.

### *Hospice*

Under the regulations for Hospice Care (COMAR 10.09.35), a terminally ill Medical Assistance recipient may, under certain conditions, elect to become a hospice care enrollee in lieu of receiving regular Medical Assistance benefits. An eligible recipient, who elects hospice care, must obtain services for conditions related to the terminal illness directly from, or under arrangements by, a designated hospice care provider and the physician identified as the recipient's attending physician at the time of election of hospice care. The hospice care provider will act as the care manager for the recipient and reimbursement for services will not be available without clearance from the hospice care provider. Recipients enrolled in the Hospice Care Program will receive a special blue-and-white identification card with the notation "HOSPICE CARE." The Eligibility Verification System (EVS) message will state the customary eligibility information and add "but restricted" when the recipient is enrolled in hospice care. For further information about the program or providing services not related to the recipient's terminal illness, contact the DHMH Managed Care Program (Hospice Care Program) at 301-225-1678 (M-F, 8:30 AM - 4:30 PM).

---

## *MPA Advisement*

---

The Maryland Pharmacists Association (MPA) recently advised Med Chi that staff pharmacists for Medco, the country's largest mail-order prescription house, will be calling physicians to request they prescribe one particular drug over another. This initiative may not be based on better care for the patient but rather may be business-oriented.

Many third-party prescription programs are now asking pharmacists to work with prescribers to optimize the cost-effectiveness of therapy. In some cases, pharmacists may need to request a change in product selec-



tion in order to meet the requirements of the patient's insurance company or HMO. The MPA encourages pharmacists who have full medication profiles to contact physicians when they believe the patient should be getting a different or less expensive drug.

---

## *RBRVS Update*

---

Phase II of the Resource-Based Relative Value Scale (RBRVS) for physician services went to the Health Care Financing Administration (HCFA). Under Phase II, the Harvard study group added 15 additional specialties; cardiology, emergency medicine, gastroenterology, hematology, oncology, infectious disease, nephrology, neurology, neurosurgery, nuclear medicine, osteopathic medicine, physical and rehabilitative medicine, plastic surgery, pulmonary medicine, and therapeutic radiology. Three Phase I specialties (internal medicine, general surgery and orthopedic surgery) were resurveyed and refined. Furthermore, Phase II expands the number of procedures for which Harvard has compiled relative values to 2,700 procedure codes which cover 95 percent of Medicare charges (Phase I had relative values for 1,400 procedures).

In Phase III of the study, pre- and post-work associated with some difficult surgical cases will be further studied along with diagnostic tests and certain packages of care (e.g., kidney dialysis patients).

---

## *MMR Vaccine*

---

Based on a recommendation by the Subcommittee on Immunization and Infectious Diseases, Med Chi recently adopted the position that a second dose of the MMR Vaccine be given to all children age 12 with the option to give the vaccine to younger children ages 4-6.

Med Chi also recommends that the Haemophilus b Conjugate Vaccine distributed by Lederle Laboratories as HibTITER, be given as follows:

2-6 mos. 4 doses (2, 4 & 6 mos.; booster at 15 mos.)

7-11 mos. 3 doses, at least 1 month apart, booster at 15 months (can be incorporated in well baby schedule, i.e. 9, 12, 15 mos.)

12-14 mos. 2 doses -- (12 and 15 mos.)

15-16 mos. 1 dose

Med Chi is seeking practicing licensed Maryland physicians who are interested in serving as members of the Board of Physician Quality Assurance. Med Chi is responsible for submitting a list of physicians who meet this requirement to the Governor. Med Chi is soliciting for volunteers from component medical societies as well as advertising in the news media (*The Baltimore Sun* and *Washington Post*) to insure that all Maryland physicians are aware of the vacancy.

Med Chi membership is not a requirement for appointment to the Board of Physician Quality Assurance.

If you are interested in serving on the Board of Physician Quality Assurance please send your curriculum vitae to:

Executive Director  
Medical and Chirurgical Faculty of Maryland  
1211 Cathedral Street  
Baltimore, MD 21201-5585

For more information contact the Executive Director at 301-539-0872 or 1-800-492-1056.

---

*Physician  
Volunteers for the  
Board of Physician  
Quality Assurance  
Needed*

---

---

## Doctor/Lawyer/ Teacher Partnership Against Drugs Update

---

Under the leadership of Hiroshi Nakazawa MD, more than 100 physicians statewide have volunteered to participate in the Doctor/Lawyer/Teacher Partnership Against Drugs. In Baltimore City, many physicians and lawyers attended training sessions throughout January to speak in the more than 15 participating schools in Baltimore. On the Eastern Shore, Stephen F. Waters MD reported that doctor/lawyer teams have visited schools in Worcester County, and John Seymour MD and Susan Hayman, Esq. spoke with seventh-grade students at Galena Middle School in December. In Western Maryland, Charles Wright MD and Ann Herbert Rollins, Esq. of Frederick County met with students at West Frederick Middle School in January. In Southern Maryland, Anne Arundel County coordinator Ronald C. Sroka MD reported that his county has more than enough physicians and lawyers for every school in the county.

Other counties in Maryland are currently coordinating the inception of their programs. Mike Massumi MD and Debbie Sweet, Esq., representing Baltimore County doctors and lawyers, recently met with representatives from Baltimore County schools to work the program into the county's current drug education curriculum. Prince George's County is working with Prince George's County schools to coordinate training of physicians and lawyers. Montgomery County is currently testing a pilot of the doctor/lawyer program in its schools.

If you are interested in participating in the Doctor/Lawyer/Teacher Partnership Against Drugs, contact your local component society or Med Chi's Public Relations Department at 301-539-0872 or 1-800-492-1056.

---

## Medicare 'Disenrollment'

---

Maryland physicians are advised that the 'disenrollment' period for Medicare ends February 15, 1991. For physicians who 'disenroll,' their non-participating status will become effective March 1, 1991. To 'disenroll,' contact your Medicare provider representative by February 15, 1991.

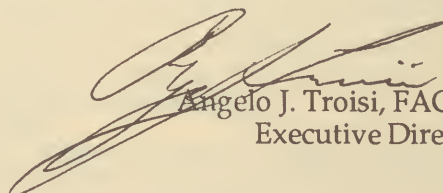
---

## Evaluating Permanent Impairment

---

The AMA *Guides to the Evaluation of Permanent Impairment* (3d ed), which had been out of print, has now been updated and will be available in February 1991. Copies of the new revision may be purchased by contacting the Order Department OP-254/8, AMA, P.O. Box 10946, Chicago, IL 60610. A supplement containing the updated material only is available for those who have previously purchased the 3d Edition of this publication.

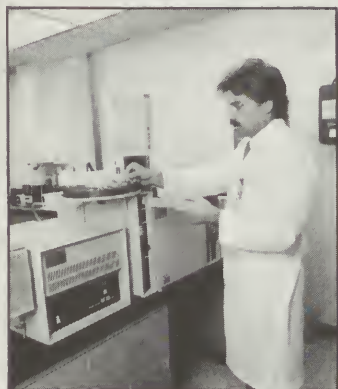
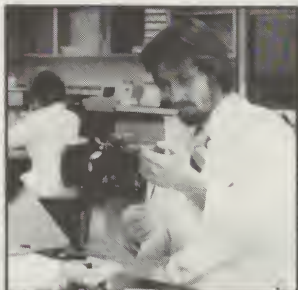
The Maryland Workers' Compensation Commission has adopted the 3d Edition of the AMA *Guides* for use by physicians in evaluating the nature and extent of permanent impairments of workers' compensation claimants, except that physicians may continue to use the goniometer evaluation technique for measuring spinal impairment (as outlined in the 2d edition of the *Guides*) or they may use the inclinometer technique specified in the 3d Edition. Evaluations performed should contain a statement as to which edition was used by the the physician. Copies of the 3d edition are on file and may be referred to at public depositories located throughout Maryland. A listing of these depositories was published in the *Maryland Register*, Volume 17, Issue 1 (January 12, 1990).



Angelo J. Troisi, FACHE  
Executive Director



# The Maryland Medical Laboratory Network



## **Quality and Accessibility...**

An industry leader, Maryland Medical Laboratory, Inc. is renowned for its high standards of performance and quality. The advanced technology of Maryland Medical Laboratory, Inc. is available around the clock and easily accessible via an extensive transportation and telecommunication network.

## **Caring with Excellence...**

Maryland Medical Laboratory, Inc. is people serving people. With years of combined laboratory experience, the Maryland Medical Laboratory, Inc. staff of caring Pathologists, medical technologists, and hundreds of administrative and support personnel stand ready to serve you and your patients.  
**INQUIRIES WELCOME**



## **MARYLAND MEDICAL LABORATORY, INC.**

1901 Sulphur Spring Road Baltimore, Maryland 21227  
(301) 247-9100, Maryland 1 (800) 638-1731, U.S. 1 (800) 368-2576

## **THE MARK OF EXCELLENCE**

# WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, P.I.E. Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality.

P.I.E. Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

**Physician Managing Boards**, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

**Quality Rated Insurance Program:** a modified claims-made plan which works in the physician's favor to reward loss-free physicians

and provides added protection not available in other policies.

**A Financially Sound Reinsurance Program** with Lloyd's of London, the world's most prestigious reinsurer.

**An Aggressive Defense Team**, experienced in all types of medical liability claims and willing to fight for your cause.

If your standards match ours, let's talk business.

---

THE P•I•E MUTUAL

---

INSURANCE COMPANY

---

North Point Tower • 1001 Lakeside Ave. • Suite 1800  
Cleveland, OH 44114-1149 • (216) 736-8400 • (800) 228-2335

---

**Winterich • Neff & Associates**  
7 East Redwood • Suite 810  
Baltimore, Maryland 21202  
(301) 234-2800

# SO WE CAN HOLD THE PREMIUMS DOWN.



### Management of Hypoglycemic Reactions in Obese Non-insulin-dependent Diabetes Patients.

*Doctor: I am a non-insulin-dependent diabetic patient (Type II). I can no longer control my diabetes with sulfonylurea drugs. My doctor has me taking thirty units of Lente insulin each morning. Everytime I reduce my food intake to lose some extra pounds, I get an insulin reaction. What can I do? I want to lose weight but I am afraid to reduce my food intake.*

This brief history describes a patient who has had inadequate diabetes education. The patient should talk with his or her physician about a total review of the diabetes management program. Eighty percent of non-insulin-dependent diabetic patients are overweight and many of them have fallen into the care pattern seen here. They are first given a meal plan, usually without instruction. (A recent survey revealed that 25 percent of patients are *not* given a meal plan.) If there is no improvement in the blood glucose level or weight loss by the next office visit, a sulfonylurea drug is prescribed. After a few more office visits, the blood glucose remains elevated and a failure of the oral agent is concluded. Insulin therapy is often the next step; the dose is gradually increased to phenomenal amounts without adequate control of the blood glucose and, if anything, a weight gain. By this time the physician is frustrated and the patient is depressed.

A better approach to the management of this type of patient would be to discontinue all diabetes therapy and begin anew as follows:

**Diabetes Education.** The physician should either have a diabetes education program available or refer the patient to an adequate program. Unfortunately, in Maryland, most of the health insurance plans do not cover the cost of such programs. However, if the value of the program is pointed out to the patient, he or she will usually accept the expense. The savings on excessive food consumption, sulfonylureas, and insulin therapy will more than compensate for this expense in the long run. For those persons with inadequate or no funds, educational programs will often offer a reduced rate, or the United Way or other help program will assist in providing the needed funds.

**Diet Education.** In most instances, meal plan instruction is a part of the diabetes education program. If it is not or it is inadequate and a patient wants individual guidance, this should be encouraged and provided. Patients will go to more expensive television-advertized diet programs when the physician fails to provide adequate guidance.

**Exercise Program.** Any prescribed exercise or increase in physical activity should be tailored to an individual patient's capacity, preferences, age, and lifestyle; people should choose exercises that are likely to

be repeated frequently and continued over a lifetime. The ideal exercise should be about the same amount each day and at about the same time each day. An ideal exercise could be walking at a pace of 3.5 miles per hour which would use about 300 calories each hour. The cost of stationary bicycles, and rowing or walking machines would be better spent in a diabetes education refresher course. Exercise increases sensitivity to insulin, improves blood glucose control, reduces risk of heart disease, and promotes weight loss.

**Psychosocial Therapy.** Sometimes a weight loss program fails because the patient is depressed or has an alcoholic spouse or children on drugs and cannot cope with the situation. Such problems must be addressed. An assessment of personal and family problems are essential and play an important part in the management of diabetes.

**Sulfonylurea Drug Therapy.** These preparations should be used only after an adequate trial of diet and exercise over a six-month to one-year period have failed to bring about normoglycemia. If a sulfonylurea drug is used, a low dose should be started and the amount increased to the maximal recommended dose if necessary before declaring the drug a failure. If a generic sulfonylurea preparation is prescribed, it is the responsibility of the physician and pharmacist to select one manufactured by a reputable firm, not necessarily the least expensive one.

**Insulin Therapy.** This should be used only after a long-term trial of diet has proved ineffective, there has been sulfonylurea drug failure, or in the presence of a complication such as infection that cannot be satisfactorily treated until the hyperglycemia has been corrected.

If the management of diabetes or any other medical problem is not progressing satisfactorily when it should be doing so, a review of the total care and a fresh start will often produce gratifying results.

De WITT E. De LAWTER MD  
Editor

### A CLINICAL MOMENT WITH...

Physicians in all specialties are invited to submit synopses of current clinical problems in a question and answer format.

Write: **A Clinical Moment With...**  
**Maryland Medical Journal**  
**1211 Cathedral Street**  
**Baltimore, MD 21201-5585**



## Which Box Would You Rather Deposit Your Insurance Reimbursements In?

If you process your claims through the mail, it takes an average of two months before your reimbursements make it to the bank.

And that can really put you in a box in terms of cash flow.

But not if you join the more than 1800 physicians who are now using HCS electronic claims systems. On the average, they receive payments in days, instead of months. Reason enough to consider using our custom designed systems.

What's more, our systems are labor savers. Stacks of claims that used to take weeks to process by mail can be sent through our claims

network in a matter of hours. Saving you enormously in administrative time. Not to mention postage.

And since HCS has the backing of a billion dollar health care organization, you can depend on us for long term support, service, and solutions as your office needs change.

Call Toll-Free 1-800-543-6711 for more information. Because in rain, snow, sleet or hail, we can deliver insurance reimbursements faster.



**Health Communication Services, Inc.**

*You'll Be Overwhelmed By Your  
Cash Flow, Not Your Overhead.*



## AMA Awarded SuperPRO Contract

Roseanne M. Matricciani RN, Esq.

**T**he Health Care Financing Administration (HCFA) has awarded the Physician Consultant Contract to the American Medical Association (AMA). This contract, which will run for one year but is renewable for four more years, will provide local physicians with input into disagreements between the PROs (Peer Review Organizations) and their overseer, the SuperPRO (Systemetrics, Inc. in Santa Barbara, California).

Since 1986, the PROs have been reviewed by the SuperPRO which looks at a sample of cases and evaluates the appropriateness and quality of the local PROs' review decisions for both approvals and denials. The SuperPRO, however, reviews the medical record only. There is no interaction with the physician who has delivered the care to the patient. Furthermore, as this process has evolved, the SuperPRO's findings have become a formal part of the assessment process for the PROs. Therefore, disagreements between the two organizations may result in the local PRO losing its Medicare contract. (The local PRO for Maryland is the Delmarva Foundation for Medical Care, Inc.)

Under the current Physician Consultant Contract, cases that have been unsuccessfully rebutted to the SuperPRO involving severity or medical practice questions, can be appealed by the PRO to the AMA or HCFA's regional office after receiving the SuperPRO's final determination. When the AMA receives an appeal, each appeal will be referred to a physician volunteer in the area where the case occurred. Physician volunteers chosen to arbitrate disagreements between the SuperPRO and the local PRO will be given medical records and documentation on the PRO and SuperPRO decisions. The physician volunteers will be asked to review the information, choose between the two positions presented, and submit a one-page summary outlining the rationale for their decision.

At the present time, the AMA has approximately 2,100 physician volunteers to review about 1,000 appeals. Volunteers must be board-certified or board-eligible doctors with current hospital admitting privileges. Since the AMA is still accepting volunteers, interested physicians may contact Rose Matricciani RN, JD, c/o Med Chi, 1211 Cathedral Street, Baltimore, MD 21201. If you would like to volunteer, send your name, address, phone number, specialty, subspecialty, and whether your practice is urban or rural, fee-for-service or associated with a health maintenance organization. Physicians who derive in excess of five percent of their income from work with the local PRO are not eligible to be volunteers. ■

# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas...and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
maryland

Free to Med Chi members.



---

# Blood Tests in the Diagnosis of Connective Tissue Diseases

---

Barry S. Handwerger MD

---

*Dr. Handwerger is Professor of Medicine and of Microbiology and Immunology, in the Rheumatology and Clinical Immunology Division, Department of Medicine, University of Maryland School of Medicine, Baltimore. Reprints: Barry Handwerger MD, Rheumatology and Clinical Immunology Division, University of Maryland School of Medicine, 10 South Pine St., Room 8-24, Baltimore, MD 21201.*

---

*Obtaining a complete rheumatological and medical history, performing a thorough physical examination, and carefully evaluating the laboratory data are all absolutely essential in making a diagnosis of connective tissue disease.*

---

The practicing physician is frequently faced with patients who present with symptoms suggesting the presence of an underlying connective tissue disease such as rheumatoid arthritis (RA), systemic lupus erythematosus (SLE), mixed connective tissue disease (MCTD), scleroderma, Sjogren's syndrome, systemic vasculitis or polymyositis/dermatomyositis. In many cases, a detailed history and physical examination will allow the clinician to decide whether or not the patient has a connective tissue disease and, if so, what disease. Over the past several decades, a number of laboratory tests have been developed which can aid the clinician in making a proper diagnosis of a connective tissue disease. This article will review a number of those tests.

## Rheumatoid Factors<sup>1,2</sup>

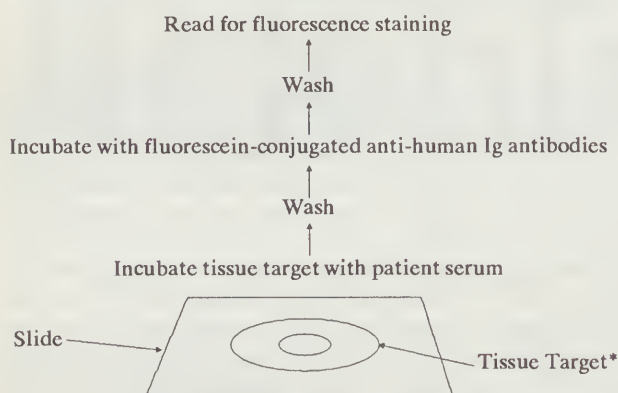
Rheumatoid factors (RF) are antibodies directed toward the crystalizable fragment (Fc) portion of the immunoglobulin (Ig) G molecule. The tests used in most clinical laboratories to detect rheumatoid factors are the latex fixation test and the sheep red blood cell agglutination (Rose-Waaler) test. Both of these tests measure the presence of IgM RF and do not readily detect rheumatoid factors of other Ig isotypes.

The presence in serum of a rheumatoid factor neither makes nor rules out the diagnosis of rheumatoid arthritis. Early during the course of rheumatoid arthritis, only 40 to 50 percent of RA patients are RF-positive. Ultimately, 75 to 80 percent of patients with rheumatoid arthritis will develop RF-positivity; however, 20-25 percent will remain RF-negative. The presence of high-titered ( $> 1:320$ ) RF in a patient with symmetric polyarthritis strongly suggests the diagnosis of RA. RA patients with high-titered RF tend to have more destructive joint disease than RF-negative RA patients. Extra-articular manifestation of RA, including subcutaneous nodules, cutaneous or systemic vasculitis,

**Table 1. Conditions Commonly Associated with Rheumatoid Factor**

1. *Normal individuals* (2 to 4 percent of population)
2. *Asymptomatic relatives of patients with RA*
3. *Aging* (10 to 20 percent of patients > 60 years)
4. *Connective tissue diseases*: RA, SLE, scleroderma, MCTD, dermatomyositis, Sjogren's syndrome
5. *Acute viral infections*: EBV-induced infectious mononucleosis, hepatitis, influenza, and many others
6. *Post-vaccination*: May yield falsely elevated titers of anti-viral antibodies
7. *Parasitic infections*: Trypanosomiasis, kala-azar, malaria, schistosomiasis, filariasis, etc.
8. *Chronic bacterial infections*: Tuberculosis, leprosy, yaws, syphilis, brucellosis, SBE, salmonellosis
9. *Hyperglobulinemic states*: Hypergammaglobulinemic purpura, cryoglobulinemia, dysproteinemias, paraproteinemias
10. *Chronic liver diseases*: cirrhosis of the liver, chronic active hepatitis
11. *Chronic pulmonary diseases*: sarcoidosis, idiopathic pulmonary fibrosis
12. *Neoplasms*: After irradiation or chemotherapy

**Figure 1. Fluorescent Antinuclear Antibody Test: The Assay System**



\*Usual tissue targets: mouse kidney cells, mouse liver cells, cells of a human epithelial cell line, HEP2, or cells from Epstein-Barr (EBV) - transformed human lymphoblastoid cell lines

**Table 2. Patterns of FANA Immunofluorescence**

Pattern	Antigens	Diseases
1. Homogeneous	DNP, histones	Any CTD, drug-induced SLE, several non-rheumatic diseases
2. Rim	dsDNA	SLE
3. Speckled	ENA*	Most CTD
4. Nucleolar	RNA polymerase I, nucleolar RNP, PM-Scl antigen, NOR-90k protein, undefined nucleolar antigens	Primarily scleroderma, but also Sjogren's, polymyositis, and SLE
5. Centromeric	centromere	CREST variant of scleroderma, scleroderma

DNP = deoxyribonucleoprotein; dsDNA = double stranded deoxyribonucleic acid; ENA = extractable nuclear antigens; CTD = connective tissue disease

\* See Table 4

mononeuritis multiplex, serositis, parenchymal lung disease, scleromalacia perforans, and Felty's syndrome, occur almost exclusively in RA patients with high-titered serum rheumatoid factor.

As demonstrated in Table 1, a large number of conditions other than rheumatoid arthritis are also associated with the presence of serum rheumatoid factors. Asymptomatic relatives of patients with rheumatoid arthritis have an increased incidence of RF-positivity. Approximately 2 to 4 percent of normal individuals and 10 to 20 percent of people over 60 years of age will have low-titered rheumatoid factors. Rheumatoid factors are seen in more than 90 percent of patients with Sjogren's syndrome and approximately 20 to 30 percent of patients with SLE, scleroderma, mixed connective tissue disease, or dermatomyositis. A number of acute viral infections and chronic parasitic or bacterial infections are associated with RF-positivity. Patients with subacute bacterial endocarditis will frequently develop serum rheumatoid factors which disappear with successful therapy of the disease. Rheumatoid factors may develop in patients with hypergammaglobulinemic states, chronic liver disease, and chronic pulmonary disease, and following irradiation or chemotherapy for malignancy. In all of these conditions, except RA and Sjogren's syndrome, rheumatoid factors are usually low-titered.

### The Lupus Erythematosus (LE) Cell Test<sup>3</sup>

The LE cell or LE clot test reflects the phagocytosis of nuclei and/or nuclear material coated with complement-fixing IgG anti-deoxyribonucleoprotein (DNP) antibodies. This test is of historic interest only. It is not as sensitive as the fluorescent antinuclear antibody test (FANA) and does not give as much useful information as FANA.

### Fluorescent Antinuclear Antibody Test<sup>3-6</sup>

Patients with SLE and many patients with other connective tissue diseases produce autoantibodies directed against nuclear antigens. These antibodies are usually detected by use of a fluorescent antinuclear antibody test. As illustrated in Figure 1, a FANA is performed by adding patient serum to a slide containing an appropriate tissue target. If the patient's serum contains antinuclear antibodies, the antibodies will bind to the nuclei in the cells of the tissue target. Following the addition of a fluorescein-conjugated antihuman immunoglobulin antibody, the nuclei, which have bound antibody, will fluoresce.

As illustrated in Table 2, five distinct patterns of fluorescence may occur in the FANA test. A homogeneous pattern, in which the nucleus is diffusely and uniformly fluorescent, occurs in patients who make antibodies against deoxyribonucleoprotein or histones. This fluorescence pattern can be seen in patients with any connective tissue disease and in patients with a variety of nonrheumatic diseases (Table 3). The rim



pattern of fluorescence is seen in patients whose serum contains antibodies against double-stranded (ds) deoxyribonucleic acid (DNA). Since anti-dsDNA antibodies are found almost exclusively in patients with SLE, the presence of a rim pattern on a FANA is almost pathognomonic of SLE. A speckled FANA results from the presence of antibodies to nuclear antigens that are extractable in physiological saline - extractable nuclear antigens (ENA). A positive speckled FANA can be seen in most connective tissue diseases. Further characterization by other immunological assays of the antigen specificity of the antibodies responsible for a patient's speckled FANA can be of help in differential diagnosis. A nucleolar pattern of immunofluorescence is seen mainly in patients with scleroderma, but can occur in patients with primary Sjogren's syndrome, polymyositis, or SLE. A centromeric FANA, due to anti-centromere antibodies, is seen primarily in patients with the CREST (calcinosis, Raynaud's syndrome, esophageal dysfunction, sclerodactyly, telangiectasis in scleroderma) variant of scleroderma, but can also be seen in patients with scleroderma who do not have the CREST syndrome and in about 12 percent of patients with primary biliary cirrhosis, approximately half of whom have features of scleroderma. The presence of anti-centromere antibodies in patients with idiopathic Raynaud's syndrome may suggest a transition to scleroderma.

A positive FANA is seen in 95 percent of patients with SLE, 5 to 10 percent of patients with discoid lupus without systemic involvement, 52 percent of patients with RA, 55 percent of patients with scleroderma, 95 percent of patients with MCTD, 40 percent of patients with polymyositis/dermatomyositis, and 33 percent of patients with systemic vasculitis.

Although in the proper clinical setting the presence of antinuclear antibodies (ANAs) in a patient's serum can strongly support the diagnosis of a connective tissue disease, the mere presence of antinuclear antibodies does not definitively prove that the patient has a connective tissue disease. Asymptomatic relatives of

patients with lupus have an increased incidence of ANA-positivity. Approximately 25 percent of normal, healthy females over the age of 60 have low-titered ANA in their sera, while approximately 5 percent of older individuals have positive ANA in significant titers. As illustrated in Table 3, ANAs have been detected in a variety of nonrheumatic illnesses. In addition, a number of drugs can induce ANA-positivity, with or without other evidence of a lupus-like syndrome. When a positive ANA occurs in a nonrheumatic disease, the ANA is usually low-titered. The presence of low-titered ANA-positivity, therefore, is nondiagnostic. The proper interpretation of a positive ANA must be made in the context of the patient's history, physical examination, and other laboratory findings.

### Anti-DNA Antibodies<sup>7-12</sup>

Antibodies against single-stranded (ss) DNA may be present in the sera of patients with any connective tissue disease or in the sera of patients with nonrheumatic diseases, such as chronic active hepatitis or primary biliary cirrhosis. In addition, a small percentage of normal, healthy individuals have low-titered anti-ssDNA antibodies. As a result, the presence of anti-ssDNA antibodies is of little diagnostic help in the differential diagnosis of connective tissue diseases.

In contrast, antibodies to double-stranded (native) DNA are found almost exclusively in the sera of patients with SLE. Anti-dsDNA antibodies tend to be present in SLE patients during periods of active disease, especially active renal disease. Although the titer of anti-dsDNA antibodies frequently parallels the activity of renal lupus, high-titered anti-dsDNA antibodies can be seen without active renal involvement.

In most clinical laboratories, anti-dsDNA antibodies are detected by radioimmunoassay or enzyme-linked immunoabsorbent assay (ELISA). In performing either of these assays, the laboratory must be extremely careful to exclude the presence of any single-stranded DNA in their DNA antigen preparation. A *Crithidia luciliae* immunofluorescence assay can also be used for the detection of anti-dsDNA antibodies. *Crithidia* is an organism which has a kinetoplast that contains helical native DNA, free of other nuclear antigens, including single-stranded DNA. Since immune reactivity with the kinetoplast indicates the presence of anti-native DNA antibodies, the *Crithidia* assay is more specific for antibodies to dsDNA than either the radioimmunoassay or ELISA; however, it is less sensitive.

### Anti-ENA Antibodies<sup>5,6,13-20</sup>

Antibodies to a large number of extractable nuclear antigens have been described in patients with connective tissue diseases. As illustrated in Table 4, antibodies against the Sm or Smith antigen are found exclusively in patients with SLE; however, only about

**Table 3. Nonrheumatic Diseases with (+) ANA**

1. Asymptomatic relatives of SLE patients
2. Aging (present in up to 25 percent of normal women over 60 years of age)
3. Chronic active hepatitis
4. Primary biliary cirrhosis
5. Myasthenia gravis
6. Hashimoto's thyroiditis
7. Diabetes mellitus
8. Ulcerative colitis
9. Uveitis
10. Idiopathic pulmonary fibrosis
11. Pneumoconiosis
12. Burns
13. Leprosy
14. EBV-induced infectious mononucleosis
15. Thymomas and selected other malignancies
16. Drugs (hydralazine, procainamide, anticonvulsants, chlorpromazine, alpha-methyl dopa, isoniazide, sulfonamides, penicillins, tetracyclines, oral contraceptives, propylthiouracil, D-penicillamine)



25 percent of patients with SLE have anti-Sm antibodies. Patients who are anti-Sm antibody-positive are almost always also anti-RNP antibody-positive. Anti-RNP antibodies can be found in the sera of patients with many different connective tissue diseases, including SLE, RA, scleroderma, and hypocomplementemic urticarial vasculitis, but are especially common in patients with mixed connective tissue disease. Antibodies to the Ro and La antigens (or SS-A or SS-B antigens, as they are also called) occur in patients with primary Sjogren's syndrome, and in patients with SLE, scleroderma, or RA who have secondary Sjogren's syndrome. Patients who are anti-La antibody-positive are almost always anti-Ro antibody-positive. The opposite, however, is not true. Anti-Ro antibodies, in the absence of anti-La antibodies, are also seen in patients with classical SLE in the absence of Sjogren's syndrome, ANA-negative SLE, subacute cutaneous lupus, and lupus associated with C2 deficiency. Anti-Ro antibodies appear to play an important role in the skin lesions and the complete heart block that occur in children with neonatal SLE. Anti-Ro antibodies are uniformly present in the sera of these children and their mothers.

Antibodies to PL-7, PL-12, and alanine tRNA are rare, but are highly specific for myositis. Antibodies against Jo-1 and PM-Scl (PM-1) occur in patients with polymyositis and in patients with dermatomyositis-myositis and polymyositis-scleroderma overlap syndromes, respectively. Antibodies to Mi<sub>2</sub> are found in 25 percent of patients with dermatomyositis and only rarely in patients with other connective tissue diseases. Antibodies against Scl-70 (topoisomerase I) are found almost exclusively in patients with scleroderma. Forty-three percent of patients with diffuse scleroderma and 18 percent of patients with limited scleroderma are anti-Scl-70 antibody-positive. Anti-Ku antibodies are found in 35 to 50 percent of patients with SLE, MCTD, and polymyositis-scleroderma overlap. Approximately 2 to 10 percent of SLE patients have antibodies to the proliferating cell

nuclear antigen (PCNA or cyclin), which is an auxiliary protein of DNA polymerase-delta. Antibodies to RNA polymerase have been reported to be present in 100 percent of patients with SLE and MCTD, 78 percent of patients with RA, and 4 percent of scleroderma patients.

Although most clinical laboratories are able to measure anti-ENA antibodies directed against Sm and RNP, only a few clinical labs measure antibodies to Ro and La. Assays for the detection of antibodies to other ENA are only performed in a few clinical or research laboratories and are not generally available as clinical diagnostic tests.

### Anti-histone Antibodies<sup>21</sup>

Histones are the most abundant nuclear proteins. Anti-histone antibodies are present in the sera of almost all patients with drug-induced lupus and 25 to 60 percent of patients with idiopathic SLE.

### Anti-phospholipid Antibodies<sup>22-26</sup>

Lupus anticoagulants are IgG or IgM antibodies directed against the acidic phospholipids important in the formation of the prothrombinase complex. Lupus anticoagulants cause a prolongation in all phospholipid-dependent coagulation tests, including the partial thromboplastin time (PTT or aPTT), Russell's viper venom time, kaolin plasma clot time, and kaolin PTT. The prothrombin time (PT) is usually normal or only slightly prolonged, and the thrombin time is normal. When a lupus anticoagulant is present in plasma, the prolonged PTT is not corrected by a 1:1 mix of the plasma containing the lupus anticoagulant with normal plasma. Moreover, when a PT or PTT is performed using diluted thromboplastin, the time to clot formation is disproportionally prolonged by the presence of a lupus anticoagulant.

Although plasma containing a lupus anticoagulant does not clot as rapidly as normal plasma in phospholipid-dependent coagulation tests, patients with lupus anticoagulants only rarely have any associated bleeding disorder, and then only when there is concomitant thrombocytopenia, hypoprothrombinemia, or vasculitis. Patients with a circulating lupus anticoagulant, in fact, have a very high incidence of arterial or venous thrombosis, recurrent spontaneous abortions, and intrauterine fetal death.

Six to 16 percent of lupus patients will develop a lupus anticoagulant sometime during the course of their disease. As illustrated in Table 5, lupus anticoagulants can also be found in some patients with other rheumatic diseases, nonrheumatic autoimmune diseases such as idiopathic thrombocytopenic purpura (ITP) or autoimmune hemolytic anemia, and several neoplasms. In addition, lupus anticoagulants can occasionally be seen in patients treated with drugs that can induce a lupus-like disease and in a small percentage of otherwise healthy individuals. Patients

**Table 4. Antibodies to Extractable Nuclear Antigens (ENA): Disease Associations**

EDN	Connective Tissue Diseases (CTD)
Sm	SLE
RNP	MCTD, SLE, RA, scleroderma, other CTD
Ro/SS-A	Sjogren's, SLE, other CTD
La/SS-B	Sjogren's, SLE
PL-7 (threonyl-tRNA synthetase)	polymyositis
PL-12 (alanine-tRNA synthetase)	polymyositis
Jo-1 (histidyl-tRNA synthetase)	polymyositis, dermatomyositis
PM-Scl (PM-1)	polymyositis, polymyositis-scleroderma overlap
Mi <sub>2</sub>	dermatomyositis
Scl-70 (topoisomerase I)	scleroderma
Ku	SLE, MCTD, polymyositis-scleroderma overlap
RNA polymerase I	SLE, MCTD, RA, scleroderma
PCNA (Cyclin)	SLE



with circulating lupus anticoagulants have a higher than normal incidence of ANA-positivity, anti-erythrocyte antibodies (with or without autoimmune hemolytic anemia), anti-cardiolipin antibodies, a false positive Venereal Disease Research Laboratory (VDRL) test for syphilis, thrombocytopenia, and cryoglobulinemia.

Cardiolipin (diphosphatidylglycerol) is a major component of the VDRL antigen. Anti-cardiolipin antibodies are found in patients with SLE and other connective tissue diseases, and in a small percentage of otherwise healthy individuals. Clinically, anti-cardiolipin antibodies are associated with a false positive VDRL test for syphilis and the presence of a circulating lupus anticoagulant. Patients with anti-cardiolipin antibodies, like patients with a circulating lupus anticoagulant, have a high incidence of arterial or venous thrombotic episodes, recurrent spontaneous abortions, and intrauterine fetal deaths.

### Complement<sup>27-29</sup>

Complement is a series of proteins found in the serum and body fluids which, when activated, interact in a defined sequential manner to produce a number of biologically active products which are important in inflammation and which can destroy cells that have bound activated complement components to their cell surfaces. As illustrated in Figure 2, there are two pathways of complement activation, the classical pathway and the alternative pathway. Activation of the classical pathway is initiated when IgG- or IgM-containing antibody-antigen complexes fix the first component of complement (C1q) to the Fc portion of the immunoglobulin molecule. In contrast, the alternative pathway can be activated without antibody. Its activation can be triggered by inflammatory proteases or polymeric substances, such as pneumococcal polysaccharide SIII. Activation of either complement pathway involves the conversion of proenzymes to active proteolytic enzymes, with the subsequent sequential proteolysis of other components of complement.

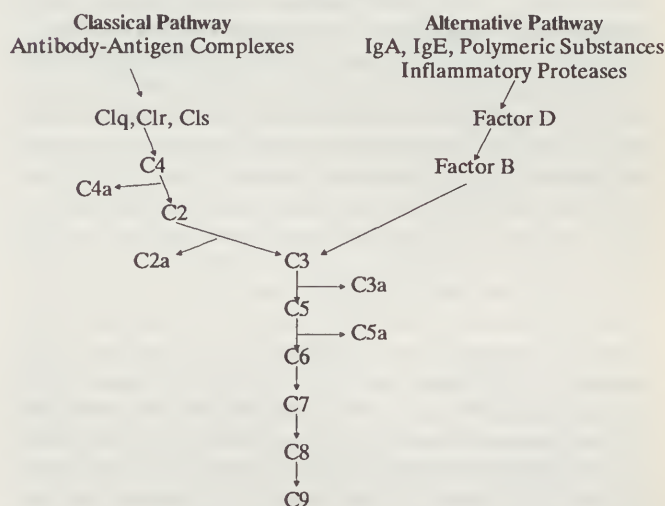
As illustrated in Table 6, during the course of complement activation, a number of biologically active molecules are generated. These molecules can lead to increased vascular permeability, the activation of mast cells and basophils, adherence of complement-coated cells or particles to glomeruli and various immune cells (immune adherence), enhanced phagocytosis, chemoattraction of monocytes, macrophages and polymorphonuclear leukocytes, modulation of B cell function, and cell lysis mediated by the terminal membrane attack complex of complement.

In a number of connective tissue diseases, the activation of complement appears to be a central component in the production of tissue pathology. The deposition of circulating immune complexes in tissues leads to complement activation, with the subsequent generation of complement-derived chemotactic factors (C5a, C5b67). Polymorphonuclear leukocytes (PMNs) are

**Table 5. Diseases Associated with Circulating Lupus Anticoagulants**

1. *SLE* (6-16 percent patients)
2. *Other rheumatic diseases*: RA, JRA, MCTD, Sjogren's, polyarteritis nodosa, scleroderma, systemic and pulmonary vasculitis, Behcet's disease
3. *Other autoimmune diseases*: ITP, autoimmune hemolytic anemia
4. *Neoplasia*: Multiple myeloma, Hodgkin's lymphosarcoma, prostatic and cervical cancer
5. *Drug-induced*: chlorpromazine, procainamide, hydralazine
6. *No associated disease* - "normals"

**Figure 2. The Two Pathways of Complement Activation**



**Table 6. Biologically Active Products of the Complement System**

Complement Product	Biological Activity
C4, C2 kinin	Increased vascular permeability
C3Bb	Chemoattractant for neutrophils and monocytes
Bb	Spreading of monocytes
C3a	Anaphylatoxin; suppresses B cell responses
C5a	Anaphylatoxin; chemoattractant for neutrophils and monocytes
C3b	Multiple effects depending on cell bearing C3b receptors; immune adherence; enhances phagocytosis
iC3b	Binding to glomeruli, monocytes, granulocytes and natural killer cells
C3d	May modulate B cell function
C567	Can bind to "innocent bystander" cells and initiate formation of C5b-C9 complex
C5b-C9	Membrane attack complex

attracted to the site by the chemotactic complement components. The PMNs attempt to phagocytize the deposited immune complexes and in so doing become activated and release their lysosomal enzymes, which results in tissue damage.

Several different assays are utilized in clinical laboratories to quantitate complement levels. The most commonly used is a total hemolytic complement

or CH<sub>50</sub> assay. This assay measures the ability of a test specimen to lyse antibody-coated sheep erythrocytes. The reciprocal of the dilution of test specimen which results in the lysis of 50 percent of the antibody-coated cells is reported as the complement titer. This assay measures the integrity of the entire classical pathway of complement activation. The concentration of individual components of complement can also be measured in either functional assays or in immunological assays. Clinically, the most commonly measured of the individual complement components are C3 and C4.

Low serum complement levels are indicative of complement consumption, decreased synthesis of complement compounds, or an inherited complement deficiency. Decreased serum complement levels secondary to complement consumption can be seen in patients with SLE, particularly those with active lupus nephritis; essential cryoglobulinemia; systemic vasculitis; nonrheumatic, immune complex-mediated diseases such as post-streptococcal glomerulonephritis and membranoproliferative glomerulonephritis; and systemic infections such as subacute bacterial endocarditis, infected atrioventricular shunts, pneumococcal sepsis, gram-negative sepsis, viremias, or parasitemias. Patients with severe hepatic failure and severe malnutrition may have low serum complement levels due to decreased synthesis of complement components. Decreased complement synthesis can be distinguished from increased complement consumption by measurement of the plasma levels of complement activation factors such as C3a. C3a is a split product of C3, which is found in measurable quantities in serum only during periods of active complement activation.

Inherited deficiencies of all eleven classical pathway proteins and several of the control proteins have been described. C2 deficiency is by far the most common complement deficiency, occurring in about 1 percent of the normal population; all of the other inherited component deficiencies are relatively rare. C1 esterase inhibitor deficiency causes hereditary angioedema. Inherited deficiency of C1q, C1r, C1s, C2, C4, C5, C6, C7, or C8 have been associated with lupus-like connective tissue disease or Raynaud's syndrome. Deficient processing of immune complexes is thought to be the pathogenic mechanism responsible for the association of complement deficiencies with rheumatological diseases. Inherited deficiency of C3 is associated with recurrent pyogenic infections. And, inherited deficiencies of C5, C6, C7, C8, and C9 are associated with recurrent sepsis with *Neisseria* species, presumably due to failure of complement-mediated lysis of the microorganisms.

**Muscle Enzymes<sup>30-33</sup>**

Creative phosphokinase (CPK), aldolase, serum glutamic oxaloacetic transaminase (SGOT), and lactate dehydrogenase (LDH) activities are elevated at some time during the course of disease in essentially all

patients with polymyositis, dermatomyositis, or the myositis associated with SLE, MCTD, scleroderma, or rheumatoid arthritis.

**Hepatitis B Serologies<sup>34-36</sup>**

In several different clinical settings, infections with hepatitis B virus are associated with rheumatic symptoms. During the prodromal phase of hepatitis B virus infection, patients frequently complain of diffuse polyarthralgias and may have frank polyarthritis. In 10 to 54 percent of patients with polyarteritis nodosa, the disease is associated with hepatitis B infection, the demonstration of hepatitis B surface (HB<sub>s</sub>) antigen in involved arteries, and the formation of hepatitis B virus-anti-hepatitis B virus immune complexes. One-third to two-thirds of patients with "essential" cryoglobulinemia have HB<sub>s</sub> antigen or anti-HB<sub>s</sub> antibodies present in their sera or cryoprecipitates. In each of these clinical situations, appropriate hepatitis B serology can be of help in differential diagnosis.

**Cryoglobulins<sup>37-39</sup>**

Cryoglobulins are cryoprecipitable immunoglobulins or immune complexes, which redissolve on warming to 37°. The intravascular deposition of cryoglobulins *in vivo* can lead to the production of cutaneous or systemic vasculitis and glomerulonephritis. It should be remembered that whenever blood is drawn for quantitation of cryoglobulin levels, the blood must be kept at 37° prior to and during clotting, otherwise a significant portion of the cryoglobulin may be removed from the blood with the clot. Cryoglobulins are usually quantitated by allowing serum to cryoprecipitate at 0 to 5° C for twenty-four to seventy-two hours and then measuring either the cryocrit or the amount of cryoprecipitate formed per ml of serum.

As illustrated in Table 7, cryoglobulins can be broadly classified into three types. Types I and II cryoglobulins are found most commonly in patients with immunoproliferative diseases. Type III cryoglobulins, which are found in approximately half the patients

**Table 7. Cryoglobulins**

Type	Ig Type(s)	Usual Associated Diseases
I (25%)	monoclonal IgM, IgG, IgA or light chain	immunoproliferative disease
II (25%)	mixed cryo with monoclonal RF (IgM, IgG, IgA) against polyclonal IgG	immunoproliferative disease
III (50%)	Mixed cryo with polyclonal RF against polyclonal IgG, may contain non-Ig molecules as well	(1) autoimmune and rheumatic diseases (SLE, RA, Sjogren's systemic vasculitis), ITP, AIHA (2) infectious diseases (hepatitis, EBV-induced mononucleosis, CMV, SBE, leprosy, syphilis, trypanosomiasis) (3) essential cryoglobulinemia



with cryoglobulinemia, contain polyclonal rheumatoid factors and polyclonal IgG, and may contain non-immunoglobulin molecules. Type III cryoglobulins are found in patients with rheumatic diseases such as SLE, RA, primary Sjogren's syndrome, and systemic vasculitides, and in patients with idiopathic thrombocytopenia purpura, autoimmune hemolytic anemia, a number of viral, bacterial and parasitic infections, and essential cryoglobulinemia.

### Immune Complex Assays<sup>40-42</sup>

Clinically, circulating immune complexes are most commonly measured by quantitating C1q binding to the immune complexes by the Raji cell assay, which measures the binding of complement-fixing immune complexes to complement receptors on Raji cells, and by an anti-C3 solid-phase radioimmunoassay. These assays are plagued by problems of standardization and by a number of potential artifacts, including the *ex vivo* formation of immunoglobulin aggregates which can be mistakenly quantitated as immune complexes. The immune complex assays vary in specificity and sensitivity, and because of inherent idiosyncracies, none of the assays are able to detect all species of immune complexes. As a result, the quantitation of circulating immune complexes is of limited clinical usefulness. These assays are best used as research tools.

### Synovial Fluid Analysis<sup>43,44</sup>

The examination of synovial fluid from a clinically involved joint can be an extremely useful test in the differential diagnosis of rheumatic diseases. Synovial fluids can generally be classified into three groups - noninflammatory, inflammatory, and septic. Noninflammatory synovial fluids are straw to yellow in color, transparent, and have a high viscosity and a white blood cell count (WBC) of  $< 2000/\text{mm}^3$ , generally with  $< 25$  percent polymorphonuclear leukocytes. Noninflammatory synovial effusions can be seen in a number of diseases, including osteoarthritis, traumatic arthritis, mechanical derangement, hypothyroidism, acromegaly, hyperparathyroidism, hemochromatosis, ochronosis, villonodular synovitis, sickle cell disease, Ehlers-Danlos syndrome, and amyloidosis.

Inflammatory synovial fluids are yellow in color, translucent, and have a low viscosity and a white cell count generally in the range of  $2000-75,000/\text{mm}^3$  usually with greater than 50 percent PMN. Inflammatory synovial effusions are seen in patients with rheumatoid arthritis, juvenile rheumatoid arthritis (JRA), SLE and other connective-tissue diseases, ankylosing spondylitis and other seronegative spondyloarthropathies, Behcet's disease, familial Mediterranean fever, Whipple's disease, sarcoidosis, subacute bacterial endocarditis, serum sickness, multicentric reticulohistiocytosis, and the crystal-induced arthritides (gout, pseudogout and hydroxyapatite arthritis).

Septic joint fluids are of variable color and viscosity,

are generally opaque, and often contain  $100,000 \text{ WBC}/\text{mm}^3$  with greater than 95 percent PMN. Fluids containing more than  $100,000 \text{ WBC}/\text{mm}^3$  should be considered to be septic until proven otherwise. Even the demonstration of crystals in such a fluid does not rule out coexisting infection. When synovial fluid cell counts are between  $50,000$  and  $100,000 \text{ WBC}/\text{mm}^3$ , differential diagnosis is more difficult. Septic fluids can have white cell counts in this range or even lower, particularly in immunocompromised hosts or in patients whose infections have been partially treated with antibiotics. Patients with tuberculosis or gonococcal joint infections do not usually have high synovial fluid white cell counts. Moreover, synovial fluids from patients with crystal-induced arthritis, rheumatoid arthritis, and Reiter's disease will frequently have WBC counts in this intermediate range, and occasionally even higher.

Whenever septic arthritis is considered in the differential diagnosis, synovial fluid should be sent for culture and Gram-stained. All inflammatory synovial fluids should be examined by compensated polarized light microscopy for the presence of urate or calcium pyrophosphate dihydrate crystals to rule in or out the diagnoses of gout and pseudogout.

### HLA Typing<sup>45,46</sup>

The major histocompatibility (transplantation antigen) complex in man is called the HLA (human leukocyte antigen) system. There are three classes of HLA antigens. The class I antigens are the antigens of the HLA-A, -B and -C loci; class II HLA antigens are the antigens of the HLA-DP, -DQ and -DR loci. Genes controlling the synthesis of C4, C2 and Factor B of the complement system are located within the HLA gene complex on human autosomal chromosome 6. These three complement components are the class III HLA proteins.

Over the past two decades, it has been recognized that a number of diseases occur with increased frequency in individuals who have certain HLA antigens. Table 8 lists some of the reported associations of HLA with rheumatic diseases. The recognition of the association of specific HLA antigens with specific diseases has significantly enhanced our understanding of the genetics and epidemiology of those diseases.

HLA typing of any given individual patient, however, is of little or no clinical diagnostic value. None of the diseases which are HLA-associated are 100 percent associated with any specific HLA antigen; as a result, there are patients who have the disease and do not have the specific HLA marker for that disease. Moreover, most individuals in the population who possess a specific disease-associated HLA antigen do not have the disease in question. As a result, HLA typing should not be used as a diagnostic tool.

During the past five years, sophisticated molecular techniques, including analyses of restriction fragment length polymorphisms and DNA sequencing, have begun to be applied to the study of HLA and disease



**Table 8. Reported Associations of HLA and Rheumatic Diseases**

Disease	HLA Antigen
Ankylosing	B27
Inflammatory spondylitis	B27
Inflammatory bowel disease-associated spondylitis	B27
Reiter's syndrome	B27
Reactive arthritis	B27
Isolated sacroiliitis	B27
Whipple's disease	B27
Psoriatic arthritis (axial and peripheral arthritis)	B13, Bw16, B17, B27, B38
Behcet's disease	B5, (w51)
Takayasu's Disease	B5, DRw52, DR2
SLE	DR2, DR3, DQw1, DQw2, C4AQO
Sjogren's (primary)	DR2, DR3
JRA	B27, Bw35, DR4, DR5, DRw8 (with different clinical subsets of JRA)
Dermatomyositis	DR3
Rheumatoid arthritis	DR4, DR1
Giant cell arteritis	DR4

associations. Over the next few years, these techniques should permit a much more refined analysis of the mechanisms responsible for the association of specific HLA antigens with various disease processes.

### Summary

Making the diagnosis of connective tissue disease can at times be extremely difficult. Obtaining a complete rheumatological and medical history, and performing a thorough physical examination are absolutely essential. This article has reviewed several of the laboratory parameters which can aid the clinician in the differential diagnosis of connective tissue diseases. Which tests should be ordered in any given individual patient should be determined by the clinical setting. Careful evaluation of the laboratory data, in the context of the patient's history and physical examination, should, in general, allow the clinician to make the proper rheumatological diagnosis.

### References

1. Carson DA, Pasquali JL, Tsoukas CT et al. Physiology and pathology of rheumatoid factors. Springer Semin Immunopath 1981;4:161.
2. Carson DA. Rheumatoid factor. In Textbook of rheumatology. Kelley WN, Harris ED, Ruddy S, Sledge CB (eds.). Philadelphia: WB Saunders, 1989.
3. Hargraves MM, Richmond H, Morton R. Presentation of two bone marrow elements: The 'Tart' cell and 'L.E.' cell. Proc Staff Meet Mayo Clinic 1948;23:25.
4. Fries JF. Systemic lupus erythematosus: A clinical analysis. Philadelphia: WB Saunders, 1975.
5. Tan EM. Autoantibodies to nuclear antigens (ANA): Their immunobiology and medicine. Adv Immunol 1982;33:167.
6. Reichlin M. Antinuclear antibodies. In Textbook of rheumatology. Kelley WN, Harris ED, Ruddy S, Sledge CB (eds.). Philadelphia: WB Saunders, 1989.
7. Tan EM, Schur PH, Carr RI et al. Deoxyribonucleic acid (DNA) and antibodies to DNA in the serum of patients with systemic lupus erythematosus. J Clin Invest 1966;45:1732.

8. Lloyd W and Scheer PH. Immune complexes complement and anti-DNA in exacerbations of systemic lupus erythematosus. Medicine 1981;60:208.
9. Locker JD, Medof MD, Burnett RM et al. Characterization of DNA used to assay sera for anti-DNA antibodies: Determination of the specificities of anti-DNA antibodies in SLE and non-SLE rheumatic disease states. J Immunol 1977;118:694.
10. Isenberg DA, Dudeney C, Williams W et al. Measurement of anti-DNA antibodies: A reappraisal using five different methods. Ann Rheum Dis 1987;46:448.
11. Pincus T, Schur PH, Rose JA et al. Measurements of serum DNA-bonding activity in SLE. N Engl J Med 1969;281:701.
12. Sontheimer RD and Gilliam JN. An immunofluorescence assay for double-stranded DNA antibodies using 'Crithidia luciliae' kinetoplast as a double-stranded DNA substrate. J Lab Clin Med 1978;91:550.
13. Hardin JA. The lupus autoantigens and the pathogenesis of systemic lupus erythematosus. Arthritis Rheum 1986;29:457.
14. Reichlin M. Significance of the Ro antigen system. J Clin Immunol 1986;6:339.
15. Petri M, Watson R, Hochberg MC. Anti-Ro antibodies and neonatal lupus. Rheum Dis Clinics of NA 1989;15:335.
16. Maddison PJ, Provost TT, Reichlin M. Serological findings in patients with 'ANA negative' systemic lupus erythematosus. Medicine 1981;60:87.
17. Sharp GC, Irvin WS, Tan EM et al. Mixed connective tissue disease - An apparent distinct rheumatic disease syndrome associated with specific antibody to an extractable nuclear antigen (ENA). Am J Med 1980;68:701.
18. Shero JH, Bordwell B, Rothfield ND et al. High titers to autoantibodies to topoisomerase I (Scl-70) in sera from scleroderma patients. Science 1986;231:737.
19. Steen VC, Powell DL, Medsger TA, Jr. Clinical correlations and prognosis based on serum autoantibodies in patients with systemic sclerosis. Arthritis Rheum 1988;31:196.
20. Targoff IN, Arnett FC, Reichlin M. Antibody to threonyl-transfer RNA synthetase in myositis sera. Arthritis Rheum 1988;31:575.
21. Fritzler MJ and Tan EM. Antibodies to histones in drug-induced and idiopathic lupus erythematosus. J Clin Invest 1978;62:560.
22. Byron MA. The clotting defect in SLE. Clin Rheum Dis 1982;8:137.
23. Gastineau DA, Kazmier FJ, Nichols WL et al. Lupus anticoagulant: An analysis of the clinical and laboratory features of 219 cases. Am J Hematol 1985;19:265.
24. Lubbe WF and Liggins GC. Lupus anticoagulant and pregnancy. Am J Obstet Gynecol 1985;153:322.
25. Harris EN, Boey ML, Mackworth-Young CG et al. Anticardiolipin antibodies: Detection by radioimmunoassay and association with thromboses in systemic lupus erythematosus. Lancet 1983;2:12.
26. Lockshin MO, Qamar T, Druzin ML et al. Antibody to cardiolipin, lupus anticoagulant and fetal death. J Rheumatol 1987;14:259.
27. Frank MM. Complement in the pathophysiology of human disease. N Engl J Med 1987;316:1525.
28. Ruddy S. Complement. In Textbook of rheumatology. Kelley WN, Harris ED, Ruddy S, Sledge CB (eds.). Philadelphia: WB Saunders, 1989.
29. Dalmaso AP. Complement in the pathophysiology and diagnosis of human disease. CRC Out Rev Clin Lab Sci 1986;24:123.
30. Bohan A, Peter JB, Bowman RL et al. A computer-assisted analysis of 153 patients with polymyositis and dermatomyositis. Medicine 1977;56:255.
31. Oxenhandler R, Hart M, Gorman L et al. Pathology of skeletal muscle in MCTD. Arthritis Rheum 1977;20:985.
32. Clements PJ, Furst DE, Campion DS et al. Muscle disease in progressive systemic sclerosis diagnostic and therapeutic considerations. Arthritis Rheum 1978;21:62.
33. Tsokos GC, Mountsopoulos HM and Steinberg AB. Muscle involvement in SLE. JAMA 1981;246:766.
34. Alarcon GS and Townes AS. Arthritis in viral hepatitis: Report of two cases and review of the literature. Johns Hopkins Med J 1973;132:1.



## ADVANCED MRI DIAGNOSTICS FOR THE BALTIMORE-WASHINGTON CORRIDOR MEDICAL COMMUNITY



7120 Contee Road  
Laurel, Maryland 20707

The Maryland Diagnostic Imaging Center provides magnetic resonance imaging (MRI), offering clinicians access to anatomical and biochemical information often unavailable through older diagnostic methods.

MRI is non-invasive and does not require radiation, but uses magnetism, radio waves and computers to produce images with unparalleled anatomical information. MRI scans involve no known risk.

The Maryland Diagnostic Imaging Center is conveniently located on the campus of the Greater Laurel-Beltsville Hospital, one-half mile east of Interstate 95.

- Excellent suburban location;
- A radiologist is available for professional consultation;
- Immediate reports;
- A FAX is on site for scheduling or processing reports;
- We hand deliver duplicate films to your office.
- Evening hours available.

Most Maryland area insurers cover MRI.

**TO SCHEDULE APPOINTMENTS FOR YOUR  
PATIENTS, CALL US AT (301) 725-8995.**

35. Duffy J, Lidsky MD, Sharp JT et al. Polyarthritis, polyarteritis and hepatitis B. *Medicine* 1976;55:19.

36. Levo Y, Gorevic PD, Kassab HJ et al. Association between hepatitis B virus and essential mixed cryoglobulinemia. *N Engl J Med* 1979;296:1501.

37. Gray HM and Kohler PF. Cryoimmunoglobulins. *Semin Hematol* 1973;10:87.

38. Brouet JC, Clauvel JP, Danon F et al. Biologic and Clinical significance of cryoglobulins: A report of 86 cases. *Am J Med* 1974;57:755.

39. Invernizzi F, Gailli M, Scrino G et al. Secondary and essential cryoglobulinemias. *Acta Hematol (Basel)* 1983;70:73.

40. Zubler RH and Lambert PH. Detection of immune complexes in human diseases. *Prog Allergy* 1978;24:1.

41. Theofilopoulos AN and Dixon FJ. The biology and detection of immune complexes. *Adv Immunol* 1979;28:89.

42. Plotz PH. Current comment: Studies of immune complexes. *Arthritis Rheum* 1982;25:1151.

43. Hasselbacher P. Arthrocentesis and synovial fluid analysis. In *Primes of the rheumatic diseases*. 9th edition. Schumacher HR (ed.). Atlanta: Arthritis Foundation, 1988.

44. Schumacher HR, Jr. Synovial fluid analysis and synovial biopsy. In *Textbook of rheumatology*. Kelley WN, Harris ED, Ruddy S, Sledge CB (eds.). Philadelphia: WB Saunders, 1987.

45. Winchester RJ. The major histocompatibility complex. In *Textbook of rheumatology*. Kelley WN, Harris ED, Ruddy S, Sledge CB (eds.). Philadelphia: WB Saunders, 1989.

46. Tiwari JL and Terasaki PL. HLA and disease associations. New York: Springer Verlag, 1985.

### Acknowledgments

The author thanks Ms. Shirley Harrington for excellent secretarial assistance in the preparation of this manuscript. This work was supported by United States Public Health Service grants AR 37628 and AI 27885, and by grants from the Veterans Administration (Merit Review) and the Maryland Lupus Foundation. ■



THE MRI CENTER  
AT MARYLAND  
GENERAL HOSPITAL —  
A NEW RESOURCE  
FOR MARYLAND  
PHYSICIANS

Maryland General Hospital has installed a Picker Vista MRI 1.0 Telsa Scanner. This system permits high resolution, thin slice imaging capability and small fields of view, all with superior image quality.

Our System and services offer many benefits to area physicians...

- Convenient patient appointments.
- A dictaphone voice retrieval system which allows instant access to dictated MRI reports from any telephone including home, office or even car phones.
- A large magnet gantry and table to accommodate large or obese, and claustrophobic patients up to 300 lbs.
- Twenty-four hour or less report turn around.
- A financial counselor to facilitate MRI payments.
- Actual copy of study available to physician upon request.

The MRI Center at Maryland General Hospital  
827 Linden Avenue Baltimore, Maryland 21201  
301-225-8121

# AIM HIGH

## **SPECIALIZE IN AIR FORCE MEDICINE.**

ER Physicians. Radiologists. OB/GYNs and other specialists!

Today's Air Force gives you the freedom to specialize without the financial overhead of running a private practice. Talk to an Air Force medical program manager about the tremendous benefits of becoming an Air Force medical officer:

- No office overhead
- Dedicated, professional staff
- Quality lifestyle and benefits
- 30 days vacation with pay each year

Examine your future in the Air Force. Learn if you qualify. Call

**USAF HEALTH  
PROFESSIONS**

**(301)981-7897  
COLLECT**





---

# Maryland's Cytology Labs: 1989-90 Proficiency Testing Results

---

John M. DeBoy DrPH and Barbara R. Jarboe CT (ASCP, IAC)

---

*From the Community Health Surveillance and Laboratories Administration's Division of Laboratory Licensure, Certification and Training, Department of Health and Mental Hygiene, Baltimore. Reprints: John DeBoy DrPH, Division of Laboratory Licensure, Certification and Training, Laboratories Administration, 201 West Preston St., Baltimore, MD 21201.*

---

*In 1990, the Department of Health and Mental Hygiene provided proficiency-testing to seventy-three cytology laboratories, and 293 technical employees. Sixty-three of these labs, 132 of 154 pathologists, and 130 of 139 cytotechnologists passed without having to undergo retesting or retraining. Failing laboratories accounted for approximately 2 percent of the cervicovaginal slides diagnosed in 1989. Labs with the lowest passing rates were small ones operated by single pathologists not employing cytotechnologists. Eight pathologists either surrendered their state permit or were required to obtain additional training; no cytotechnologist required additional training.*

---

In the fall of 1987, the Laboratories Administration of the Maryland Department of Health and Mental Hygiene (the Department) recruited expert volunteers to help the Department develop and implement a proficiency-testing (PT) program covering all cytology laboratories holding a Maryland permit to operate. A Maryland law<sup>1</sup> mandating this PT program took effect July 1, 1988, and state regulations<sup>2</sup> implementing the program were promulgated effective October 30, 1989. Pilot-testing was conducted from February through July 1989. The first full, regulatory testing cycle for in-state laboratories was conducted from January through August 1990. This paper presents and discusses the PT results from the pilot-tests in 1989 and the first, fully-implemented regulatory cycle in 1990.

## Materials and Methods

The methods and procedures used to develop Maryland's cytology PT program have already been described in detail.<sup>3,4</sup> Each pathologist and cytotechnologist being tested received a test set of ten glass, cervicovaginal (Papanicolaou) slides of actual patient material. Examinees were required to diagnose each slide by assigning it to one of four diagnostic test categories which had been defined using standardized diagnostic terminology.<sup>3</sup> Each categorized slide received ten, five, or zero points, depending on whether the diagnosis was correct, partially incorrect, or incorrect, respectively.<sup>4</sup> All test slides had been previously evaluated and accepted by a panel of expert pathologists who had assigned each test slide to the correct diagnostic test category.

Maryland's cytology PT program resembles the way cytology is actually practiced in the field; PT procedures allow pathologists who routinely employ cytotechnologists to have a randomly selected cytotechnologist first screen the test set for the pathologist. Pathologists who do not employ cytotechnologists are required to screen their own slides when taking a test.

Examinees were required to obtain at least ninety out of a possible hundred points to pass an exam, where each of ten correctly diagnosed slides was worth ten points. Examinees who failed their first test during the 1990 cycle were required to sit for a second examination within thirty days. Those who failed a second test had to obtain five days of documented retraining before being allowed to sit for a mandatory third test. Each cytotechnologist received two test scores. The first, an educational score, was derived utilizing the same grading system used in grading pathologists; full credit was based solely on direct correlation with the correct answer. The second, a regulatory score, graded cytotechnologists less stringently. Full or partial credit was awarded if the cytotechnologist's incorrect answer would not affect the follow-up of the patient (e.g., a dysplasia versus a cancer diagnosis would still warrant that the slide be seen by a pathologist).

The pilot cycle in 1989 consisted of a single test being given to each examinee. No retests were given in 1989. In this paper, unless stated otherwise, all test results from the 1990 cycle were those obtained from the first tests taken in that cycle. Data from retests in 1990 were excluded from most Tables to allow for comparison with the pilot-test cycle's results and to preclude possible skewing of the 1990 data. All cytotechnologist test results in this paper, unless otherwise noted, were based on educational scores to allow for comparison with pathologist test results. All data in this paper come only from cytology labs located physically within the State of Maryland.

## Results

Administrative data collected as part of the 1990 cytology PT cycle showed that seventy-three in-state cytology laboratories held a Maryland permit to operate in 1990 and that these laboratories processed approximately 1.17 million cervicovaginal slides in 1989. Table 1 shows that a majority (68.4 percent) of these labs processed fewer than 10,000 cervicovaginal slides per year. Seven large labs accounted for about 700,000 (60 percent) of all the cervicovaginal slides processed in the State. Table 2 shows that most labs are small operations employing only one to three technical personnel.

Laboratory PT scores by passing rates, lab workloads, and numbers of cytotechnologists are given in Tables 3-5, respectively. Table 6 shows the types and distribution of 528 examinees who sat for an initial examination. Breakdowns of pathologists' and cytotechnologists' test scores are given in Tables 7-10. Table 11 lists the PT scores of pathologists required to sit for retests. Statistics on retests are presented in Tables 12 and 13. None of the nine cytotechnologists who failed a first test failed a retest. Sixteen (73 percent) of the twenty-two pathologists required to sit for a retest did not employ a cytotechnologist (Table 10). No pathologist who employed a cytotechnologist failed a retest (Table 13). Error rates involving false

**Table 1. 1989 Cervicovaginal Slide Workloads for Labs Licensed in 1990**

No. of Slides Screened	No. of Labs	%
<1,000	25	34.2
1,000 - 9,999	25	34.2
10,000 - 19,999	10	13.7
20,000 - 29,999	4	5.5
30,000 - 39,999	2	2.7
40,000 - 49,999	0	0.0
50,000 - 59,999	3	4.1
> 80,000	4	5.5
	<u>73</u>	<u>99.9</u>

**Table 2. Maryland's Cytology Labs in 1990 by Staff Size**

Staff	Labs	%
Pathologist(s) only	23	32
1-2 cytotechnologists	34	46
3-5 cytotechnologists	9	12
> 5 cytotechnologists	7	10
	<u>73</u>	<u>100</u>

**Table 3. PT Passing Rates for Cytology Laboratories**

Year	Pass/Total Labs	% Passing
1989	53/72	73.6
1990	63/73	86.3

$$\chi^2=11.14, p<0.01$$

**Table 4. Annual Workloads and Number of Labs Failing PT in 1989 and 1990**

Slide Workloads	1989	1990
<1,000	6	7
1,000- 4,999	7	2
5,000- 9,999	2	0
10,000- 19,999	1	1
20,000- 29,999	1	0
30,000- 39,999	1	0
40,000- 49,999	1	0
	<u>19<sup>a</sup></u>	<u>10<sup>b</sup></u>

<sup>a</sup> Diagnosed 155,000 (14%) of 1.1 million slides screened in MD in 1988.

<sup>b</sup> Diagnosed 23,500 (2%) of 1.17 million slides screened in MD in 1989.

**Table 5. Cytology Labs' Passing Rates by Number of Cytotechnologists Employed**

Year	Number of Cytotechnologists (%)		
	None	1-5	6 or More
1989	7 /18 (39)	27/31 (87)	4/4 (100)
1990	15/23 (65)	41/43 (95)	7/7 (100)

**Table 6. MD's Cytology PT Examinees**

Examinees	1989	1990
Pathologists:		
with cytotechs.	97	112
without cytotechs.	32	42
Subtotals	129	154
Cytotechnologists	106	139
Totals	235	293



**Table 7. Examinees' Passing Rates**

Examinees	Examinees Passing (%)	
	1989	1990
Pathologists	100/129 (77.5)	132/154 (85.7)
Cytotechnologists:		
Rate A <sup>1</sup>	93/106 (87.7)	130/139 (93.5)
Rate B <sup>2</sup>	82/106 (77.3)	118/139 (84.9)

<sup>1</sup>Rate based on regulatory grading system<sup>2</sup>Rate based on educational grading system**Table 8. Pathologists' Cytology PT Scores**

Score	Number (%) (Cumulative %)	
	1989	1990
100	52 (40.3) (40.3)	87 (56.5) (56.5)
95	30 (23.2) (63.5)	22 (14.3) (70.8)
90	18 (13.9) (77.4)	23 (14.9) (85.7)
85	13 (10.1) (87.5)	10 (6.5) (92.2)
80	7 (5.4) (92.9)	6 (3.9) (96.1)
75	6 (4.6) (97.5)	4 (2.6) (98.7)
70	1 (0.8) (98.3)	1 (0.6) (99.3)
65		1 (0.6) (99.9)
60	1 (0.8) (99.1)	
55		
50	1 (0.8) (99.9)	
	129	154

**Table 9. Cytotechnologists' Educational PT Scores**

Score	Number (%) (Cumulative %)	
	1989	1990
100	63 (59.4) (59.4)	73 (52.5) (52.5)
95	10 (9.4) (68.9)	23 (16.6) (69.1)
90	20 (18.8) (87.7)	22 (15.8) (84.9)
85	3 (2.8) (90.5)	10 (7.2) (92.1)
80	7 (6.6) (97.1)	4 (2.9) (95.0)
75		3 (2.1) (97.1)
70	3 (2.8) (100)	4 (2.9) (100)
	106	139

**Table 10. PT Passing Rates for Pathologists Who Did and Did Not Employ Cytotechnologists**

	Passing Rate (%)	
	1989	1990
Pathologists		
Did employ cytotechs.	84/97 (86.6)	106/112 (94.7)
Did not employ cytotechs.	16/32 (50.0)	26/42 (61.9)

negatives, false positives, and unsatisfactory slides are presented in Table 14. None of the differences in comparable proportions of Maryland data in Table 14 were significant (i.e., the probability that a difference was due to chance was 0.05 calculating  $\chi^2$  tests for equality of any two independent proportions).

### Discussion

There was a 13.3 percent increase from 1989 to 1990 in the number of cytology laboratories in Maryland which passed their first test; this increase was statistically significant (Table 3). Improvement was expected because most examinees in 1990 had participated in the pilot-testing cycle in 1989 and were familiar and

more at ease with the PT process. This improvement would probably have been even greater if the fifty-six (19.1 percent) of the 293 examinees who did not participate in 1989 had been able to do so (Table 6). This addition of more than fifty first-time examinees was a surprise to the authors who made a concerted effort to identify all potential examinees in 1989 and provide them with the opportunity to take the pilot test. Many of the first-time examinees in 1990 chose not to participate in the pilot, were new graduates, or were employees of cytology laboratories who had previously worked outside of Maryland.

The drop, from nineteen to ten, in the number of laboratories that failed their first test (Table 4) is very important when one looks at the size of these laboratories. In 1989, 68 percent of the laboratories failing a first test screened fewer than 5,000 slides per year. In 1990, laboratories of this size accounted for 90 percent of these failures; no laboratory reading more than 20,000 slides per year failed a test. This means that the total number of slides diagnosed in Maryland laboratories failing the first test in a PT cycle dropped from approximately 155,000 slides (14 percent) in 1989 to approximately 23,500 (2 percent) in 1990. As a group, the State's larger laboratories achieved the highest passing rate. This may be attributable to greater experience associated with larger workloads and to the fact that all of the larger laboratories employed cytotechnologists. Small laboratories, operated by one or more pathologists, that do not employ cytotechnologists exhibited the highest failure rates in both 1989 and 1990 (Table 5).

The number of pathologists passing the first test in the 1990 PT cycle increased by 8.2 percent compared to 1989 (Table 7). Cytotechnologists' regulatory and educational pass rates increased by 5.8 percent and 7.6 percent, respectively (Table 7). Improving individual scores are due, at least in part, to increasing familiarity with the test on the part of examinees. In a few tests during the pilot cycle, pathologists' poor performances were associated with blanket acceptance of their cytotechnologists' screening results. The number of very low educational scores by pathologists (i.e., less than eighty) dropped from nine to five (Table 8); the number of low scores by cytotechnologists increased from three to seven (Table 9). The increased number of very low scores for cytotechnologists, while not statistically significant, may be associated with more marginally competent or less experienced cytotechnologists sitting for their first test in 1990.

As in 1989, pathologists in 1990 who screened their own set of test slides were more likely to fail their first test in the PT cycle (Table 10). The passing rate for pathologists who employed cytotechnologists improved by 8.1 percent. The passing rate for those who did not employ cytotechnologists improved by 12.0 percent. The greater rate of improvement in the latter group is encouraging. As these solo practitioners are being made aware of their shortcomings, more of them are obtaining additional training or, as in three cases

(Table 11), voluntarily surrendering their State permit to operate a cytology laboratory.

Fourteen (63.5 percent) of twenty-two pathologists who failed their first test in the 1990 PT cycle, passed their first retest (Table 11). Nine (40.9 percent) of these same twenty-two pathologists passed that retest with a score of one-hundred. Eight pathologists who failed their initial test also either failed their first retest or voluntarily surrendered their State permit (Tables 11 and 12). This shows that the mandatory retesting aspect of Maryland's PT program is effective in separating competent pathologists from those truly in need of retraining. The authors realize that the effectiveness of the existing system subjects a few competent pathologists to a retest, but from the authors' public health point of view, this is acceptable compared to some less stringent alternative testing process that would fail to identify marginally competent or incompetent examinees.

Requiring a score of ninety to pass also appears justified under the existing grading system. Four pathologists who failed a retest and had to obtain retraining would not have been identified if the passing score had been set at eighty (Table 11). Including the three pathologists who surrendered their permit, there are eight pathologists who either failed or might have failed a retest. This means that 5.2 percent (8/154) of the State's pathologists would have required retraining in 1990. This percentage is equivalent to the 4 to 7 percent of pathologists that New York State's cytology PT program annually identified for retraining between 1980 and 1988.<sup>5</sup>

A comparison of the number of total errors and several individual types of errors made in 1989 and 1990 shows that none of the differences were significant at the 0.05 probability level. However, the tendency toward a reduction in error rates is present in all cases (Table 14). Although a direct comparison with error rates in the New York State PT program<sup>6</sup> cannot be performed because the Maryland and New York programs used different grading systems, the overall error rates in both states are very close. This provides additional evidence that Maryland's cytology PT program, which is based on many of the same methods pioneered in New York, is functioning effectively.

The federal Clinical Laboratory Improvement Amendments of 1988 and final rules<sup>7</sup> published by the Health Care Financing Administration (HCFA) require all cytology laboratories in the country to enroll in an approved PT program that meets very specific federal standards by January 1, 1991. The PT standards called for under the HCFA rules differ in a number of ways from those in Maryland's program. These differences are quite controversial and a full discussion of the advantages and disadvantages of these differences will be published elsewhere.

However, in its present form, Maryland's cytology PT program is functioning efficiently, and is effectively accomplishing both Maryland's and the federal government's PT objectives. These include providing

**Table 11. PT Scores of Pathologists Who Sat for One or More Retests**

Pathologist	Test Scores		
	1st	2nd	3rd
1	75	90	
2	75	90	
3	85	85	95
4	80	80	95
5	85	100	
6	85	75	90
7	80	100	
8	65	90	
9	85	100	
10	85	100	
11	80	100	
12	85	NR-SP	
13	80	100	
14	85	NR-SP	
15	85	100	
16	70	90	
17	85	95	
18	75	75	85
19	75	NR-SP	
20	80	100	
21	80	75	NR-Y
22	85	100	

NR-SP=not retested, surrendered permit

NR-Y=not retested yet

**Table 12. Examinees' PT Failure Rates on First and Subsequent Tests in 1990**

Test	Pathologists	Cytotechnologists
First	22/154 (14.3%)	9/139 (6.4%)
Second	5/19 <sup>a</sup> (26.3%)	0/9 (0.0%)
Third	1/4 <sup>b</sup> (25.0%)	

<sup>a</sup> 3/22 chose not to sit for second test.

<sup>b</sup> 1/5 not yet retested.

**Table 13. PT Failure Rates for Pathologists Who Did and Did Not Employ Cytotechnologists**

Pathologists	Test(s) Failed in 1990		
	1st	2nd	3rd
Did employ cytotechs.	6/112 (5.4%)	0	0
Did not employ cytotechs.	16/42 (38.1%)	3 <sup>a</sup>	1

<sup>a</sup> Does not include three who surrendered permits before sitting for second test.

PT samples which will be tested the same as patient specimens, identifying the incompetent laboratory or laboratorian in an equitable and legally defensible manner, and providing a monitored retraining and retesting mechanism for identified laboratorians. The authors, the State's Laboratory Advisory Committee, and the Department's Cytology Advisory Committee are not sure that these same goals will be met by a cytology PT program based on the published federal cytology PT standards. There is also a strong belief that the federal standards will undergo further amendment. For these reasons, both the authors and the State's advisory committees are urging a wait-and-see approach before the Department modifies its program. Such an approach is practical as it would take from six months to a year to fully modify Maryland's



**Table 14. Comparison of PT Errors by Pathologists and Cytotechnologists in MD and NY**

State & Time Period	No. of Test Slides	Total Errors No. (%)	Type of Errors		
			FN (%)	FP (%)	UNS (%)
Maryland pathologists					
1989	1,290	126 (10.4)	92 (7.1)	42 (3.3)	32 (2.5)
1990	1,540	109 (7.1)	68 (4.4)	41 (2.7)	28 (1.8)
New York pathologists <sup>a</sup>					
1971-84	17,249	1,399 (8.1)	761 (6.1)	624 (3.6)	
Maryland cytotechnologists					
1989	1,060	104 (10.1)	84 (7.9)	23 (2.2)	28 (2.6)
1990	1,370	101 (7.4)	56 (4.1)	45 (3.3)	19 (1.4)
New York cytotechnologists <sup>a</sup>					
1971-84	13,235	1,298 (9.8)	669 (5.0)	623 (4.7)	

FN = false negatives, undercalls and unsatisfactory slides called negative; FP = false positives, overcalls and negative slides called unsatisfactory; UNS = unsatisfactory slides designated other than unsatisfactory, plus satisfactory slides designated unsatisfactory.

<sup>a</sup>Averages adapted from Collins and Patacsil.<sup>6</sup>

existing program to match federal standards, and the Department wishes to minimize disruption to both its PT program and the regulated industry.

## References

1. Md. Health Gen. Code Ann. §§17-201 (1988).
2. Md. Admin. Reg. 16(1):94-98 and 16(2):1343-44 (1989).
3. DeBoy J, Moulton E. Cytopathology: New legislative, regulatory, and proficiency testing requirements. *Md Med J* 1989;38:214-17.
4. DeBoy J. A model state program for cytology PT. *Med Lab Obs* 1989;May:57-60.
5. Collins D, Newton L. Quality assurance in cytology: New York State proficiency-testing program. *Qual Rev Bull* 1989;15:215-22.
6. Collins D, Patacsil P. Proficiency testing in cytology in New York: Analysis of a 14-year state program. *Acta cytol* 1986;30:633-42.
7. Federal Register. 55(50):9592-93 (1990). ■

## Music Medicine Clearinghouse Volunteers

The Music Medicine Clearinghouse is looking for volunteers who can give a few hours a week to assist with the collection. Duties would include photocopying, filing, shelving, light typing, light data entry, etc. For further information, please contact Susan Harman, Clearinghouse Coordinator, at 301-539-0872.



- EXTRA and the "Thermolds" shoes
- Accomodative, impression molded inlays, for proper weight distribution, made of PLASTIZOTE or PELITE
- Complete line of SPENCO products
- Custom MOLDED footwear as required
- Outside fitting in home or hospital
- Also—Complete prescription service, including many special purpose shoes and shoes suitable for brace attachment

## ZIMMERMANN'S SHOES

227 W. Saratoga St.  
Baltimore, MD 21201  
(301) 685-3665

Hours: 9 am—5 pm MTWF  
Thursday til 7 pm

**Charles E. Brown, Certified Pedorthist**  
Member, Prescription Footwear Association

**New Location:**  
558G Ritchie Hwy.  
Severna Park, MD 21146  
(301) 554-1302

Hours: 10 am—6 pm MTWS  
Thursday & Friday til 8 pm



## When it's time to send in The Special Team.

Here at PSA Financial Center, we utilize a team approach to financial problem solving, and we put together special teams as they are required to deal with special situations.

PSA Professional Liability, Inc., for example, specializes in Medical Malpractice Insurance. Our associates can call upon both in-house staff and outside specialists for their expertise when needed. And because our clients have confidence in our special teams, PSA Professional Liability is now among the largest Malpractice Insurance Agencies in Maryland.

Contact any of our affiliates to enjoy the satisfaction that comes from having a team of financial service specialists working for you.

PSA Professional Liability, Inc.  
Malpractice Insurance

PSA Financial Advisors, Inc.  
Financial Planning

PSA Financial, Inc.  
Employee Benefits



PSA Financial Center

North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

PSA Capital Management, Inc.  
Investment Management

PSA Pension Services, Inc.  
Design & Administration

PSA Insurance, Inc.  
Agents & Brokers

PSA Equities, Inc.  
Broker / Dealer

PLANNING FOR OUR CLIENTS FINANCIAL FUTURE

# When You're Facing Open Heart Surgery, The Last Thing You Should Have To Do Is Wait.

## Announcing the opening of The Heart Center at Sinai.

It's hard to imagine that you might actually have to wait your turn for a serious heart operation. But the fact is that there's a critical shortage of cardiac care facilities in Maryland.

The opening of the new Heart Center at Sinai is helping to alleviate that problem.

One of only four open heart surgery units in the metropolitan area, The Heart Center is a comprehensive, state-of-the-art facility, featuring a 56-bed cardiac unit with two operating rooms, two fully equipped catheterization labs and a Cardiac Surgical Intensive Care Unit. Our staff includes five cardiac surgeons, over 70 cardiologists and dozens of highly skilled cardiovascular nurses and technicians.

We're committed to providing the latest in diagnostic technology and therapeutic intervention. And we're making as many procedures as possible available on an outpatient basis. We also offer counseling and consultation, home care follow-up and a personally tailored rehabilitation program to help you get back to normal living as quickly as possible.

If you'd like more information about The Heart Center, or need a physician referral, give us a call at 578-5435. We're ready and waiting to help.



The Heart Center  
A T S I N A I



---

# Magnetic Resonance Imaging Diagnosis of an Intracranial Metastasis of Adenocarcinoma of the Prostate: Case Report

---

Paul R. Capito MD, Henry Wang MD, Henry Brem MD,  
Hyo S. Ahn MD, and R. Nick Bryan MD, PhD

---

*Drs. Capito, Wang and Bryan are from the Neuroradiology Division, of the Russell H. Morgan Department of Radiology and Radiology Science and Dr. Brem is from the Department of Neurosurgery, Johns Hopkins Medical Institutions, Baltimore. Dr. Ahn is from the Department of Radiology, Sinai Hospital, Baltimore. Reprints: Henry Wang MD, Meyer 8-140, Johns Hopkins Hospital, 600 N. Wolfe St., Baltimore, MD 21205.*

Adenocarcinoma of the prostate is the second most common cancer of American males over age fifty. However, the reported instances of cerebral metastases have been exceedingly rare and are usually diagnosed at postmortem.<sup>1,2</sup> This report describes an unusual case of brain metastasis from an occult adenocarcinoma of the prostate confirmed by craniotomy and tumor resection. The magnetic resonance imaging (MRI) findings of this intracranial metastasis would suggest the importance of MRI vs other imaging techniques in differentiating the type of tumor. A review of the literature is also presented.

## Case Report

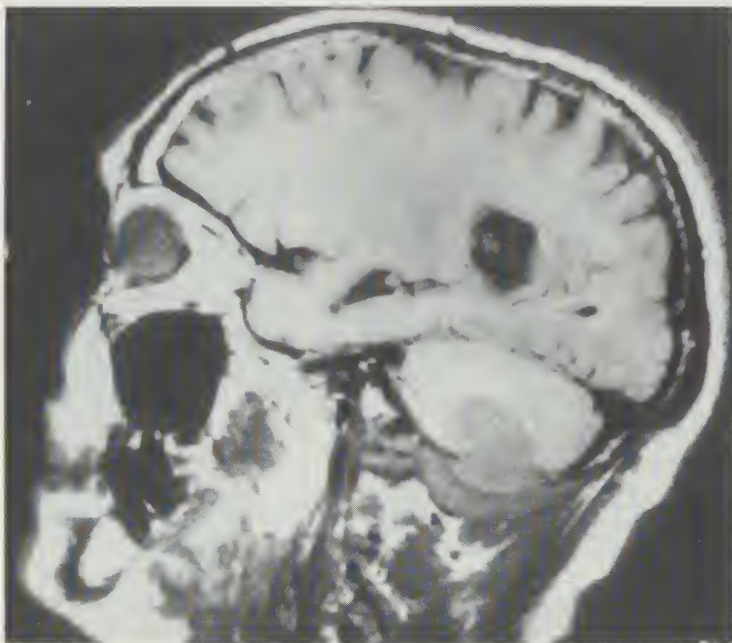
A previously healthy sixty-five-year-old man was admitted to the hospital for evaluation of neurologic symptomatology. He presented with a one-month history of ataxia with progressive worsening in gait and an increasing frequency of falls, a two-week history of severe intermittent headaches and drowsiness, and a one-week history of slight dysarthria, intermittent left hemiparesis, and a few episodes of vomiting. The patient was free of any urological symptoms. Physical examination demonstrated tongue deviation to the right, mild left eye ptosis, mild diplopia and nystagmus with right lateral gaze, mild dysmetria, and hyperreflexia of the left side with a positive Babinski on the left.

The patient underwent magnetic resonance imaging (MRI) of the head with and without intravenous gadolinium diethylene triamine pentaacetic acid (Gd-DTPA) contrast injection. The spin-echo pulse sequences T-1 weighted (TR/TE 600/20) [Figure 1], and T-2 weighted (TR/TE 2500/80) [Figure 2] images were obtained from a magnet with a field strength of 1.5 Tesla. A large lobulated lesion was situated posterior to the fourth ventricle involving the inferior and medial portions of the left and right cerebellar hemisphere; edema and mass effect were associated with this lesion. The lesion was hypointense on T-1 weighted images and hyperintense on T-2 weighted images. The posterior and in-

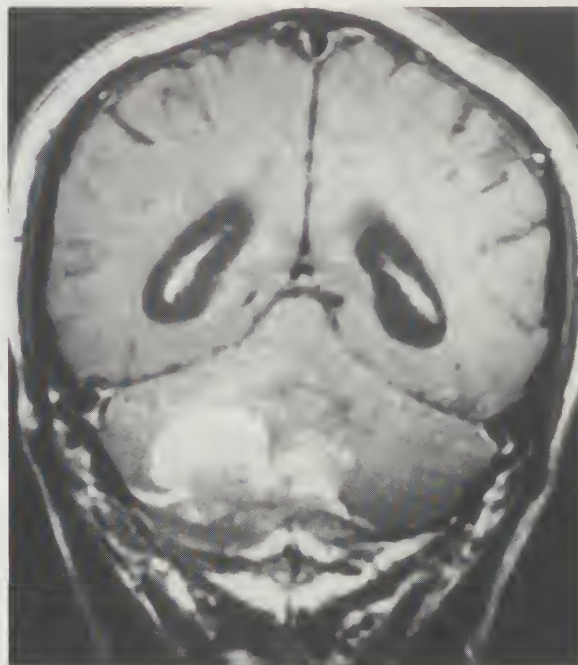
---

*Adenocarcinoma of the prostate is the second most common cancer of American males over age fifty. However, the reported instances of cerebral metastases have been exceedingly rare and are usually diagnosed at postmortem. This report describes an unusual case of brain metastasis from an occult adenocarcinoma of the prostate confirmed by craniotomy and tumor resection.*

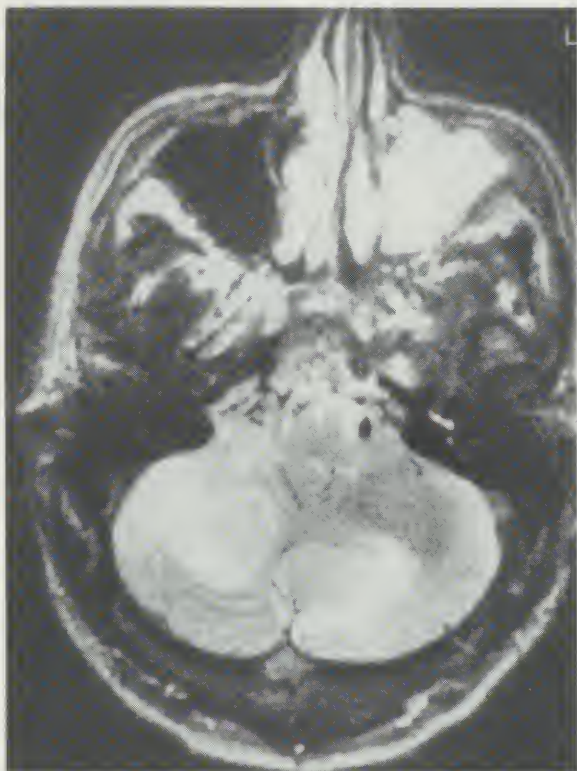
---



**Figure 1.** A large extra-axial mass abutting the inner table of the occipital bone in the posterior fossa; the mass and the involved calvarium display hypointense signals on spin-echo T-1WI.



**Figure 3.** Post contrast (I.V. Gd-DTPA) T-1W coronal MRI shows intense enhancement of the mass lesion and mild enhancement of the diseased occipital bone.



**Figure 2.** Spin-echo T-2W axial head MRI, the posterior fossa mass demonstrates hyperintense signals. The adjacent bone shows expanded diploic space with abnormal signal intensities.

ferior border of this lesion abutted the inner table of the cranium. That portion of the occipital bone overlying the mass lesion had an expanded diploic space with indistinct cortical margin, as well as containing abnor-

mal intensity signals which were low on the T-1 weighted images and slightly high on the T-2 weighted images. Following intravenous (I.V.) Gd-DTPA administration, the lesion in the cerebellum showed abnormal, diffuse, intense enhancement. The involved portion of the skull also demonstrated mild abnormal enhancement (Figure 3).

Computerized tomography (CT) of the head, unenhanced and I.V. enhanced, showed contrast enhancement of the posterior fossa mass lesion. A cerebral angiogram revealed that the mass lesion in the posterior fossa had a dense vascular blush with abnormal, large draining veins. The predominant feeding vessels to this mass arose from the muscular and the posterior meningeal branches of the right vertebral artery. A radionuclide bone scan demonstrated multiple focal areas of abnormal increased uptake of isotopes involving the base of the skull; the first, fourth, and fifth ribs on the left; the shaft of the left humerus; the proximal shaft of the left femur; and the right pedicle of the L-5 vertebral body - a pattern consistent with metastatic cancer. CT of the chest and the abdomen were negative except for the bony metastases. MRI examination of the prostate gland showed a focal lesion in the peripheral zone of the gland on the left side compatible with carcinoma. There was also evidence of capsular penetration and involvement of the left seminal vesicle.

The patient underwent surgery for tumor decompression consisting of a suboccipital craniotomy and C-1 laminectomy with tumor excision of the posterior cranial fossa mass. Upon intraoperative exploration, the bulk of the tumor appeared to be dural-based with minimal extension into the adjacent bone and



parenchyma of the right and left cerebellar hemispheres. Histologic examination of the excised specimen revealed metastatic adenocarcinoma involving the dura, cerebellar tissue, and bone. Immunoperoxidase-staining for prostate specific antigen and prostate acid phosphatase were positive in the tumor. Serum acid phosphatase was within the normal reference range being 0.6 U/L, with a repeated value of 0.4 U/L (normal range is 0.2-0.8 U/L). However, prostatic specific antigen was markedly elevated at 31.5 U/L. A needle biopsy of the prostate yielded a specimen diagnostic for a grade-3 adenocarcinoma of the prostate.

### Discussion

Intracranial metastases from prostatic carcinoma occur very infrequently and are most often found upon autopsy.<sup>2</sup> Prostatic carcinoma is the second most common malignancy found in American males.<sup>3</sup> It most commonly metastasizes to the bone, lungs, and liver, but rarely intracranially to the brain or meninges.<sup>4-6</sup> Much more common than intracranial metastasis from prostatic cancer is metastasis to the cranium or spinal column.

Several autopsy studies and literature reviews on intracranial metastases have been performed. In a review of the literature in 1976, Catane and associates found only nine cases (1.1 percent) of intracranial metastases in 792 autopsied patients with prostatic carcinoma.<sup>7</sup> Chung and Thannikkary reviewed the tumor registry of 1,314 patients with the proven diagnosis of prostatic carcinoma and found that only eight (0.6 percent) of 1,314 patients had intracranial metastases.<sup>4</sup> Two of the patients had metastasis only to the dura. After performing an extensive review of the literature in 1988, Cheng and associates found only thirty reported cases of metastatic prostatic carcinoma to the brain.<sup>3</sup> They found that it was even rarer for prostatic carcinoma to metastasize to the dura and subdural space. In October of 1988, Demierre and Berney of the University Hospital of Geneva, Switzerland reported that among 17,812 brains studied at autopsy over the previous nineteen years, 872 (4.8 percent) were found to have intracranial metastases. Of these, only twenty-one (2.4 percent) stemmed from prostatic carcinoma as the primary. Of the twenty-one cases, twelve involved the dura and only seven involved both the dura and the brain.<sup>8</sup>

Even more rarely does a patient with prostatic cancer present with neurological symptomatology from intracranial metastases prior to presenting with other signs and symptoms caused by the primary prostatic cancer or its metastasis to other more common tissues of the body, e.g., bone. From a review of the literature, only five patients with prostatic carcinoma who presented with neurological symptomatology from intracranial metastases could be found.<sup>2,4,9,10</sup> Therefore, besides the unusual intracranial metastasis of the prostatic carcinoma in our patient, the presentation of the patient neurologically with no signs or symptoms of prostatic disease is extremely uncommon. Signs and symptoms of intracranial metastases most commonly

begin after the diagnosis of prostate cancer is made. Intracranial metastasis of prostatic carcinoma is most often found at autopsy.<sup>2</sup> In this report, MRI was useful in depicting the exact compartment where the tumor was located by virtue of its multiplanar imaging capability. The extra-axial location of the tumor favored the diagnosis of a primary brain tumor such as meningioma or a metastatic neoplasm. The cerebral angiogram confirmed that the blood supply to the tumor was from the extracranial branches of the right vertebral artery, but it did not rule out the possibility of being a meningioma. However, on the MRI, the tumor lacked the tissue characteristics of meningioma which usually has signal intensity isointense to the gray matter of the brain. This lesion had long T-1 and T-2 relaxation time and enhanced intensely after Gd-DTPA injection. The presence of multiple bony lesions on CT and radionuclide studies suggested that the lesion in the posterior fossa could well be another metastatic focus with a large dural component. The involved skull did not show sclerotic changes on CT and plain x-ray, thus metastasis from prostate origin was the least suspected.

It has been postulated that the mechanism by which prostatic cancer metastasizes to the intracranial area may occur directly through the paravertebral venous plexus, avoiding bone and viscera, or as part of a multistep process in which initial metastatic foci in bone or lung metastasize to the brain.<sup>1,2</sup> In our case, the intracranial metastasis represents invasion of the brain from a diploic deposit.

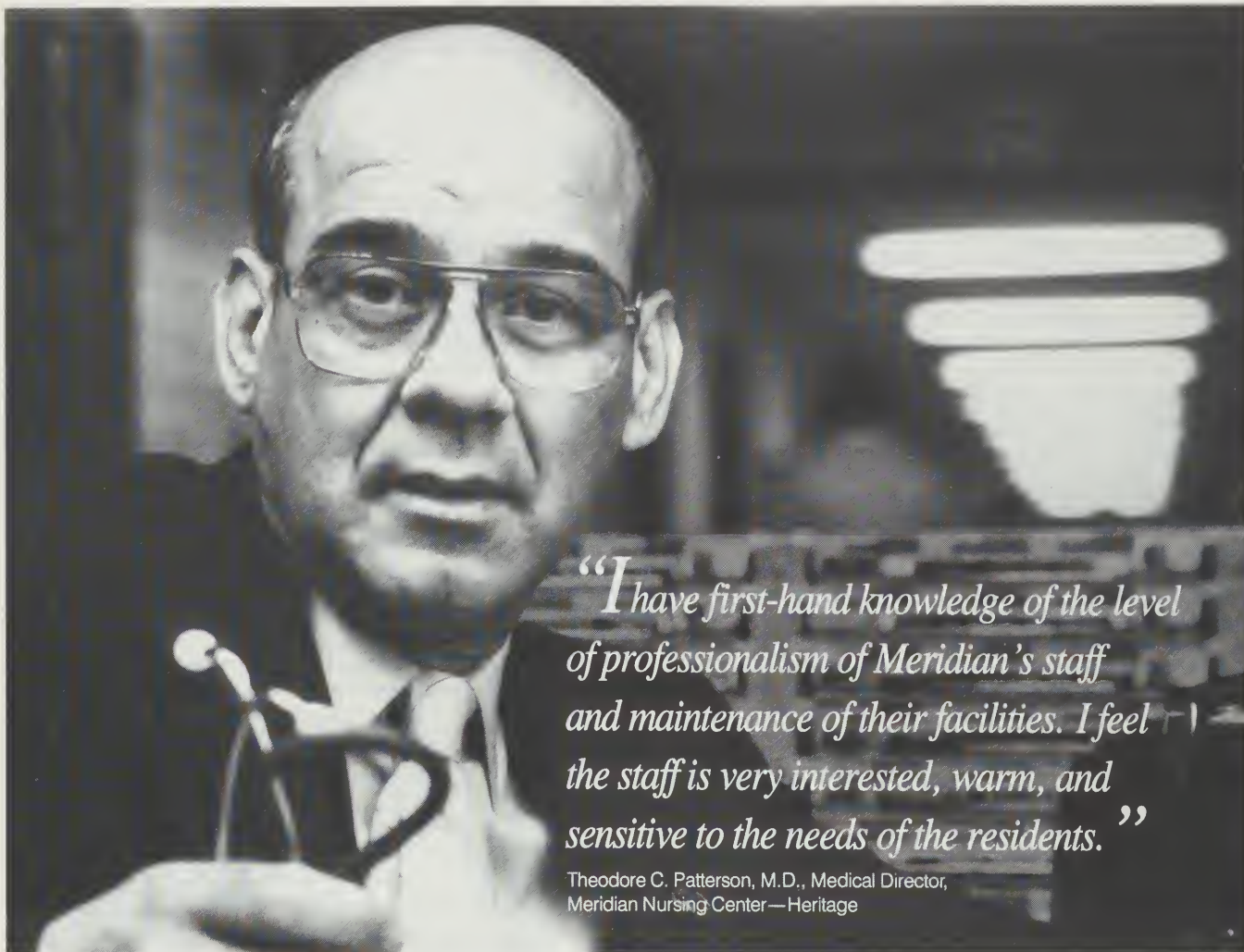
The case reported here is unique, both for the nature of the tumor and for the site of metastasis. The MRI appearance of the metastatic lesion and the application of Gd-DTPA are also illustrated.

### References

1. Taylor HG, Lefkowitz M, Skoog SJ, Miles BJ, McLeod DG, Coggin JT. Intracranial metastases in prostate cancer. *Cancer* 1984;53:2728-2730.
2. Baumann MA, Holoye PY, Hongyung C. Adenocarcinoma of prostate presenting as brain metastasis. *Cancer* 1984;54:1723-1725.
3. Cheng CLY, Greenberg J, Hoover LA. Prostatic adenocarcinoma metastatic to chronic subdural hemotoma membranes: Case report. *J Neurosurg* 1988;68:642-644.
4. Chung TS, Thannikkary C. Carcinoma of the prostate with brain metastasis. *J Surg Oncol* 1986;33:103-5.
5. Lippman SM, Buzaid AC, Iacono RT et al. Cranial metastases from prostate cancer simulating meningioma: Report of two cases and a review of the literature. *Neurosurgery* 1986;19:820-823.
6. Fink LH. Metastasis of prostatic adenocarcinoma simulating a falx meningioma. *Surg Neurol* 1979;12:253-258.
7. Catane R, Kaufman J, West C, Merrin C, Tsugada Y, Murphy, G. Brain metastasis from prostatic carcinoma. *Cancer* 1976;38:2583-2587.
8. Demierre B, Berney J. Intracranial metastasis of prostatic adenocarcinoma. *J Neurosurg* 1988;69:644.
9. Lewis I. Cerebellar metastasis from prostatic carcinoma: A case report. *Neurology* 1967;17:698-702.
10. Gopinatha RK. Carcinoma of prostate presenting as intracranial tumor with multiple cranial nerve palsies. *Urology* 1982;19:433-435.

### Acknowledgement

We thank Elizabeth Brandt for her help in manuscript preparation. ■



*“I have first-hand knowledge of the level of professionalism of Meridian’s staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents.”*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### ***Partners in Healthcare***

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer’s patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there’s our full-time activity directors, social workers, and dieticians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





### The Omnibus Budget Reconciliation Act of 1990

#### Medicare Issues

**T**he Omnibus Budget Reconciliation Act of 1990 (OBRA-90) was signed by the President on November 5, 1990. As a result of that legislation, some significant changes have occurred with regard to Medicare. The following synopsis highlights several important issues.

#### Anti-Hassle Legislation

With the Senate and House narrowly approving the final budget reconciliation package in October 1990, Medicine was able to claim several major Medicare successes. For example, four of the five elements of the Rowland/Baucus (Representative J. Roy Rowland and Senator Max Baucus) Anti-Hassle Bills (H.R. 4475, S. 2591) were adopted:

1. Reciprocal billing arrangements (cross-coverage billings) are permitted with a maximum limit of sixty days for Medicare, fourteen continuous days for Medicaid, and ninety days for locum tenens.
2. A Practicing Physicians Advisory Council to the Health Care Financing Administration (HCFA) is established. The Secretary of the Department of Health and Human Services (HHS) will appoint fifteen physicians to the Council from nominations submitted by medical organizations representing physicians. Each nominee must have submitted 250 Medicare claims in the previous year. The Council will include participating and non-participating physicians, as well as physicians practicing in rural and underserved urban areas.
3. The Secretary of HHS will conduct a study of the effects of the release of prepayment review screen parameters on physician billing for services to which the parameters apply.
4. The Secretary of HHS will conduct a study in at least four carrier areas on the effects of permitting physicians to aggregate claims denials involving common issues of fact and law, and to make joint appeals for the reversal of the denials to the carrier involved.

The passage of this legislation alleviates some of the regulatory burdens that have been placed on physicians who treat Medicare patients.

#### Medicare Physician Payment Reform

For 1991, the balance billing limits placed on physicians' evaluation and management services will be increased from the current limit of 125 percent of the prevailing charge to the lesser of the updated 1990 MAAC (Maximum Allowable Actual Charge) or 140 percent of the prevailing charge for the service in the locality.

Although the limits on actual charges for 1991 for physicians' services increased, reductions occurred in other aspects of the payment reform. For example, in 1991, primary care services will receive a 2 percent Medicare Economic Index (MEI) update but there will be no MEI update for non-primary care services. In determining the Medicare Volume Performance Standards (MVPS) for surgical services and all other physicians' services for fiscal year 1991, the Secretary's projected baseline rate of growth will be reduced by 2 percent.

Anesthesiologists, radiologists, and pathologists face significant reductions in their Medicare rates. Prevailing charge levels for physician pathology services will be reduced by 7 percent in 1991. Radiologists face a maximum reduction of 9.5 percent below the conversion factor currently applied, while anesthesiologists are looking at a 15 percent maximum reduction. (Radiology or Anesthesiology payments cannot go lower than 60 percent of the national weighted average conversion factor.) Radiologists will also experience a 10 percent drop in payments for magnetic resonance imaging (MRI) and computerized tomography (CT) scans.

Once again, new physicians are targeted for reductions. These reductions will be extended from a two-year phase-in to a four-year phase-in, limiting payments to 80 percent of the prevailing charge ceiling in the first year, 85 percent in the second year, 90 percent in the third year, and 95 percent in the fourth year of practice.

Medicare will limit payments for assistants at surgery to 16 percent of the allowance for the global surgical service. In surgical procedures where an assistant is used less than 5 percent of the time, payment for the assistant will be eliminated.

Under the new law, payment for the technical component for certain high volume diagnostic tests (identified by Medicare officials) will be limited to the average national payment. After 1992, separate payments for the interpretation of electrocardiograms (EKGs) will be eliminated when payment has also been made for a physician visit or consultation.

Prevailing charge levels for previously identified overpriced services will be further reduced in 1991 by the lesser of 15 percent or one-third of the amount they exceed the previously set locally adjusted reduced prevailing amount. For primary care services, however, the prevailing charge floor will be increased from 50 percent to 60 percent. This floor prevents payments for services from falling below 60 percent in any area of the country.

#### Living Wills

While physicians are not required to inform patients about living wills, hospitals, skilled nursing facilities,

HMOs, home health agencies, and hospice programs must maintain written policies and procedures for their adult patients regarding advance directives (living wills or durable power of attorney for health care) as a condition of their provider agreement with Medicare. The providers must:

- a. Provide written information about the patient's rights under state law to accept or refuse treatment and formulate advance directives;
- b. Provide information about the provider's policies regarding implementation of patients' rights and advance directives;
- c. Document in the medical record whether or not the patient has an advance directive;
- d. Ensure compliance with state law concerning advance directives; and
- e. Educate staff and the community on issues concerning advance directives.

It should be noted that providers cannot condition admission or treatment on the basis of the presence or absence of an advance directive.

### **Disclosure Requirements**

Many providers of Part B services, who receive payment on an assignment-related basis, will be affected by the expansion of the disclosure of ownership requirements under OBRA-90. No Part B payment will be made to reporting providers unless they have provided the Secretary of HHS with full and complete information on the identity of each person with an ownership or control interest in the provider or in any subcontractor in which the provider directly or indirectly has a 5 percent or more ownership interest. With respect to any person so disclosed or any managing employee of the provider, information must be provided on the identity of any entities providing items or services with respect to which the disclosed individual or managing employee has had a control or ownership interest at the time such information is supplied or at any time during the three-year period ending on the date the information is supplied. Furthermore, changes or updates in the information must be disclosed no later than 180 days after they take effect. Failure to provide information will be grounds for exclusion from the Medicare program, and criminal penalties will apply for providing false information.

The disclosure requirement will become effective January 1, 1993 for providers who have furnished services paid for under Part B on or before enactment of OBRA-90 or January 1, 1992 for other providers.

### **Clinical Diagnostic Laboratory Tests**

Effective January 1, 1991, the national cap on local laboratory fee schedules will be reduced to 88 percent of the national median from a rate of 93 percent. The

scheduled update for the laboratory fee schedule will be set at 2 percent for 1991, 1992, and 1993. Furthermore, the law is clarified to state that the mandatory assignment requirement for clinical laboratory services also applies to physicians' offices.

Under OBRA-89, physicians were prohibited from referring patients to clinical diagnostic laboratories in which they had a financial relationship. The reporting requirement for ownership arrangements was scheduled to become effective on October 1, 1990. However, OBRA-90 has delayed implementation of the reporting requirement until October 1, 1991. Furthermore, the reporting requirement is amended to require reporting of the names and Unique Physician Identifier Numbers (UPINs) of all physicians with an ownership or investment interest. Additionally, the legislation exempts financial relationships between hospitals and physicians if the relationship does not relate to the provision of clinical laboratory services.

### **Patient Transfers**

When considering allegations of an improper patient transfer, the liability standard to impose civil monetary penalties against a physician has been changed under OBRA-90 from knowingly to negligently. The standard of liability for physician exclusion from Medicare is changed from "knowing and willful or negligent" to "gross and flagrant or is repeated."

### **Physician Payment Review Commission**

The jurisdiction of the Physician Payment Review Commission (PPRC) has been expanded to include the authority to review and make recommendations concerning: physician licensure and certification; options to help constrain the costs of health care to employers including incentives under Medicare; Resource-based Relative Value Scale (RBRVS) implementation issues; physician manpower and graduate medical education costs; policies to provide payment incentives to increase access including policies regarding physician payment under Medicaid; utilization review and the quality of care including the effectiveness of peer review programs, quality assurance programs, and medical malpractice reforms.

### **Medicare Successes**

With all of the budgetary cutbacks, it is sometimes difficult to remember that there were Medicare successes. However, through the efforts of organized medicine, the following victories occurred:

1. Congress rejected Representative Stark's proposal to mandate triplicate prescription programs in all fifty states.
2. The final bill rejected the Administration's proposal to impose a one-dollar charge against physicians for every claim filed non-electronically.



3. The proposal to reimburse non-board certified physicians 5 percent less than certified physicians under Medicare was rejected.
4. Representative Stark's efforts to require periodic Medicare certification of physicians was rejected.
5. The proposal mandating that Physician Review Organizations (PROs) furnish copies of initial sanction notices to licensing boards was defeated.
6. The Uniformed Services University for the Health Sciences will have continued funding and its supervision will be switched to the Secretary of Defense.

### Medicaid Issues

Although much of the focus of the Omnibus Budget Reconciliation Act of 1990 concerned Medicare issues, there also have been significant legislative changes regarding Medicaid. A brief summary of these issues follows.

### Prescription Medications

In order to receive *federal* Medicaid payments for outpatient medications, drug manufacturers must participate in a rebate program, and states must participate in drug use review programs. Under OBRA-90, states are prohibited from maintaining restrictive formularies that would apply to the drug products of manufacturers who participate in the rebate program.

Starting in 1991, a drug manufacturer must agree to provide rebates to every state Medicaid program in order to participate in the rebate program. The amount of the rebate is the difference between the drug's average manufacturer price (AMP) and the lowest price at which the drug is sold (best price). The states will receive the rebate amount for every dose of the medication paid for through the states' Medicaid program. There is an alternative minimum rebate of 12.5 percent for 1991 and 1992, with 15 percent thereafter. There is also a maximum ceiling for the rebate of 25 percent for 1991 and 50 percent for 1992. Generic drug manufacturers must pay a rebate of 10 percent through 1993 and 11 percent thereafter. An additional rebate will be due if the drug manufacturer raises the price of a medication faster than the rate of inflation. Medications not in the rebate program will have federal payment authorized if:

- a. the state has determined the medication is essential to the health of Medicaid beneficiaries;
- b. the drug was rated A-1 by the Food and Drug Administration;
- c. there was approval through a state's prior authorization program; or
- d. the state's determination was reviewed and approved by the Secretary of Health and Human Services (HHS).

While the federal government has conditioned

medication payments on specific criteria, states may have prior authorization programs if they provide a response within twenty-four hours of a request and they provide for the dispensing of at least a seventy-two-hour supply of a requested covered drug in an emergency situation. In certain circumstances, the state Medicaid program can restrict the use of drugs, even those in the rebate program. For example, drug use may be restricted for the following reasons:

1. The medication is not being prescribed for a medically accepted indication.
2. The prescription vitamin and mineral products are not prenatal vitamins or fluoride preparations.
3. The medication is a barbiturate, benzodiazepine, drug efficacy study implementation (DESI) drug, nonprescription drug, or a drug which requires that associated tests or monitoring be purchased exclusively from the manufacturer or its designee.
4. The medication falls into one of the following classes:
  - a. agents used for anorexia or weight gain;
  - b. agents that promote fertility;
  - c. agents used for hair growth or cosmetic purposes;
  - d. agents used for symptomatic relief of cough and colds; and
  - e. agents used to promote smoke cessation.

Also, federal payment will not be authorized for a brand name drug when, under state law, a cheaper generic medication could be substituted.

Furthermore, by 1993, each state must have a drug use review (DUR) program which assures that prescriptions under Medicaid are appropriate, necessary, and not likely to result in any adverse medical problems. The DUR program must include a prospective and retrospective review. It must also establish a DUR Board to carry out the educational component of the program which is aimed at educating practitioners about common drug therapy problems. The DUR Board must consist of at least 33 percent, but no more than 51 percent, licensed and actively practicing physicians. At least 33 percent must be licensed and actively practicing pharmacists. Also, states are being encouraged to establish point-of-sale electronic claims management systems for processing Medicaid drug claims; the federal government will pay 90 percent of the cost of developing a system for 1991 and 1992.

### Unique Physician Identifiers

The Secretary of HHS must have a system by July 1, 1991 that provides for a unique identifier for every physician who furnishes services paid for under a state Medicaid plan. The system *may* be the same as the Medicare UPIN system. Once the identifier system is established, claims will have to include the identifier.

Under the identifier system, no foreign medical

graduate may be issued an identifier unless the individual has:

- a. passed the FMGEMS (foreign medical graduate examination in medical sciences) examinations;
- b. previously received certification from or previously passed the examination of the Educational Commission for Foreign Medical Graduates; or
- c. held a license continuously from one or more states since 1959.

States will also be required to maintain a list of the unique identifiers of all physicians certified to participate under the state plan, and it must be updated monthly.

### Advance Directives

OBRA-90 requires states to have requirements for advance directives (living wills, durable power of attorney) that will be distributed to hospitals, nursing facilities, home health care providers, personal care services, HMOs, and hospice programs receiving Medicaid funds. The requirements for advance directives are basically the same as those required under Medicare. The above-named providers must maintain written policies and procedures regarding advance directives for adult patients, provide these patients with information about the right to formulate advance directives and the right to accept or refuse treatment, document in the medical record whether the patient has an advance directive, and provide for education of staff and the community on issues concerning advance directives. The provision of care cannot be conditioned upon whether or not the patient has an advance directive. Furthermore, state law must be complied with when instituting guidelines regarding advance directives.

Along with these requirements, the Secretary of HHS must develop and implement a national campaign informing the public about advance directives.

### Benefits Related to Pregnancy and First Year of Life

States are required to provide Medicaid benefits for eligible pregnant women throughout pregnancy and for children (born on or after January 1, 1991) for one year after birth, regardless of whether the woman becomes ineligible for benefits because of increased income from employment. The requirement does not apply to a woman who has been provided prenatal care during a *presumptive* eligibility period and is ultimately determined to be Medicaid ineligible.

### Services to Children and Pregnant Women

After January 1, 1992, Medicaid payment will not be

made for physician services provided to a child under twenty-one years of age unless the physician:

- a. is board certified in Family Practice or Pediatrics;
- b. is employed by or affiliated with a federally-qualified health center;
- c. holds admitting privileges at a Medicaid-participating hospital;
- d. is a member of the National Health Service Corps;
- e. documents a current, formal consulting and referral arrangement with a board-certified pediatrician or family practitioner for purposes of specialized treatment and admission to a hospital; or
- f. has been certified by the Secretary of HHS as qualified to provide physician services to a child under twenty-one years of age.

With respect to services provided to pregnant women, Medicaid payment will not be made unless the physician:

- a. is board certified in Family Practice or Obstetrics;
- b. is employed by or affiliated with a federally-qualified health center;
- c. holds admitting privileges at a Medicaid-participating hospital;
- d. is a member of the National Health Service Corps;
- e. documents a current, formal, consultation and referral arrangement with a board-certified obstetrician or family practitioner for purposes of specialized treatment and admission;
- f. has been certified by the Secretary of HHS as qualified to provide physician services to pregnant women.

### Outreach Locations

OBRA-90 provides that federally-qualified health centers are required to provide for the receipt and initial processing of separate applications for medical assistance. The way in which health centers will make provisions for this requirement of the law to be met is vague at this time.

### Conclusion

The total impact of many of these changes will not be known until they have been in effect for a period of time. Therefore, while Med Chi can project the possible impact this legislation will have on physicians' practices, we encourage our membership to keep us informed of their concerns and problems. The responsiveness of our membership helps us to address issues in a timely manner.

ROSEANNE M. MATRICCIANI RN, Esq.  
Assistant Executive Director for Health Care Policy  
Medical and Chirurgical Faculty of Maryland



# MRI UPDATE



Figure 1



Figure 2

**CLINICAL HISTORY:** This is a 26-year-old male with back pain and right lower extremity radiation.

**FINDINGS:** This is an example of a normal study on a young adult. **COMMENT:** MRI is the screening test of first choice for suspected disorders of the lumbar spine. Notice the clear depiction of the normal L5-S1 disc (figure 1, crossed arrow). The discs of this patient exhibit high signal intensity reflecting normal hydration and none of the discs are narrowed. None of the discs indent the thecal sac which is of intermediate signal intensity and appears as the gray band in the center

of the image. The vertebral bodies are homogeneous and free of destructive lesions. The conus medullaris (arrow) is normal. This sagittal image demonstrates the advantages of MRI over other screening modalities. Routine CT scanning will not display the conus medullaris, lesions of which may masquerade as disc herniation. The general area of coverage is superior with MRI. Disc detail is much better displayed with MRI.

The axial image at L5-S1 (figure 2) exhibits delineation of intraspinal detail far superior to that of CT. The right S1 nerve root is clearly displayed (arrow) surrounded by normal perineural fat

which is the bright high intensity material in the periphery of the spinal canal. State-of-the-art MR images clearly display the bony anatomy of the lumbar spine including the facet joints (crossed arrow). Degenerative diseases and bony neoplasm are routinely detectable.

MRI involves no ionizing radiation and no intrathecal contrast material is needed. It is a patient-friendly outpatient examination well suited for screening purposes.



**Maryland  
Magnetic  
Imaging**

900 Toll House Avenue  
Frederick, MD 21701  
(301) 662-0077

Health Images facilities operate their MRI systems with all available upgrades including contiguous thin slices, high resolution head and body coils, state of the art surface coils, and cardiac gating.

Health Images facilities are a community resource available to all area physicians.



*Health Images, Inc.®*

Q

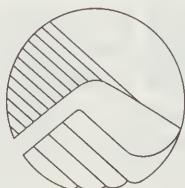
## If these are your Questions:

What is meant by impairment?  
When considering self-disclosure,  
what issues should be taken into account?  
How will others react to my  
self-disclosure?  
Should I tell my colleagues?  
What should I tell my patients?  
What should I say on applications for  
privileges, licensing, etc.?

&

A

## The Physician Rehabilitation Committee Has the Answers



For a free copy of "To Disclose or Not to Disclose," a brochure of questions and answers on the topic of self-disclosure for the physician recovering from impairment or illness, published by the Physician Rehabilitation Committee of the Medical and Chirurgical Faculty of Maryland as a service to all Maryland physicians, members and non-members, write to Med Chi, Physician Rehabilitation Committee, 1211 Cathedral Street, Baltimore, MD 21201 or call (301) 539-0872 or in MD 800-492-1056.



## Board of Physician Quality Assurance Actions

### In the Matter of John L. Flowers MD Before the Maryland Board of Physician Quality Assurance

#### Consent Order

On February 13, 1989, the State Board of Physician Quality Assurance (the Board), pursuant to its authority under *MD Health Occ. Code Ann.*, §14-302 and COMAR 10.32.07, charged John L. Flowers MD (the Respondent) with violations of the Maryland Medical Practice Act (the Act). Specifically, the Board charged Respondent under COMAR 10.31.07.02B(1) and (2)(e), (f), and (i).

The pertinent provisions of COMAR provide as follows:

COMAR 10.31.07.02b(1): After investigation, the Commission may revoke or suspend an unlicensed medical practitioner's right to practice medicine in the State, or place him or her on probation on prescribed conditions or reprimand him or her for any of the causes listed below as unprofessional conduct.

COMAR 10.31.07.02B(2):

- (e) Immoral conduct of the unlicensed medical practitioner in the practice of medicine;
- (f) Practicing medicine other than in connection with the unlicensed medical practitioner's postgraduate training program;
- (i) Willfully making and filing false reports or records in the practice of medicine.

On April 5, 1989, a hearing was held. Respondent; Michael Schatzow, Counsel for Respondent; Debra G. Woodruff, Assistant Attorney General; and Hearing Officer Charles W. Fowler were present at the hearing. The State dismissed the charge of immoral conduct by an unlicensed medical practitioner in the practice of medicine (COMAR 10.31.07.02B(2)(e)). On April 18, 1989, Mr. Fowler issued a Recommended Decision. The Respondent filed exceptions to the Recommended Decision. On June 14, 1989, an exceptions hearing was held before the Board. The Board voted to permit Respondent to return to practice as a resident at the University of Maryland Medical Systems (UMMS) under an agreement between Respondent and UMMS but had not issued a Final Order in Case Number 85-0259.

On November 7, 1989, Respondent submitted an application for a license to practice medicine in Maryland. On June 30, 1990, Respondent completed the General Surgery Residency Program at UMMS. On August 1, 1990, a settlement conference was held to review Respondent's application for licensure and resolve Case Number 89-0259. John D. Stafford MD, Acting Chief of Settlement Conference, and Christine J. Moore attended on behalf of the Board. Also

present were Respondent; Debra G. Woodruff, Assistant Attorney General, Administrative Prosecutor; Sylvia J. Williams, Paralegal; Barbara Hull Foster, Assistant Attorney General, Board Counsel; and Virginia A. Guerra, Board Case Manager.

As a result of the evidence presented at the hearing on April 5, 1989, the discussion at the exceptions hearing on June 14, 1989, and materials presented at the conference on August 1, 1990, the Board and the Respondent agreed to enter into this Consent Order which resolves all issues in Case Numbers 89-0259, 89-0290, and 90-0443.

#### Findings of Fact

1. Since July 1, 1984, Respondent has been registered to practice medicine in Maryland at the UMMS in the General Surgery Residency Program, an approved postgraduate training program, pursuant to *MD Health Occ. Code Ann.*, §14-302 (1989 Cum. Supp.)

2. In September 1988, Detective Steven W. Maglidt of the Anne Arundel County Police Department conducted an investigation of prescriptions written in several area pharmacies. The investigation revealed that from November 23, 1985 to October 14, 1988, Respondent wrote prescriptions for Hycodan syrup, a Schedule III narcotic substance; Phendimetrazine (Bontril), a Schedule III non-narcotic substance; Oxycodone (Percocet), a Schedule II narcotic substance; and Vicodin, a Schedule III narcotic substance. Some of these prescriptions were written using fictitious names and some prescriptions were written for Respondent's wife.

3. On October 15, 1988, Respondent was arrested and charged with obtaining controlled dangerous substances by fraud in the *State of MD v John Lee Flowers*, in the Circuit Court for Anne Arundel County.

4. On October 15, 1988 and October 18, 1988, after being advised of his rights, Respondent gave a statement to Detective Maglidt in which he admitted to writing the prescriptions using fictitious names. Respondent admitted that he took the prescriptions to pharmacies where he received the drugs for himself and for his wife.

5. On October 22, 1988, UMMS suspended Respondent from the General Surgery Residency Program as a result of Respondent's arrest. UMMS reported Respondent's suspension to the Board (Case Number 89-0290).

6. On February 13, 1989, the Board charged Respondent with violations of COMAR 10.31.07.02B(2)(e), (f), and (i) in charges under the Maryland Medical Practice Act, attached hereto and incorporated herein as Exhibit A.

7. On May 3, 1989, Respondent received probation before judgment in *State of MD v John Lee Flowers*.

8. On July 1, 1989, UMMS reinstated Respondent in the General Surgery Residency Program. On December 14, 1989, Respondent enrolled in the Employee Assistance Program (EAP) at UMMS.

9. In January 1990, EAP began collecting urine specimens from Respondent.

10. Respondent's urine tested positive for cannabinoid (marijuana) on February 9, 1990; February 15, 1990; and February 26, 1990.

11. On March 7, 1990, UMMS suspended Respondent from patient care duties as a result of the urinalyses which were positive for marijuana as described in paragraph 10. UMMS notified the Board of Respondent's suspension (Case Number 90-0443).

12. From March 19, 1990 through April 2, 1990, Respondent attended the Oakview Residential Treatment Program at Oakview Treatment Center in Baltimore, MD.

13. On April 30, 1990, Respondent signed a Physician Rehabilitation Advocacy Contract with the Committee on Physician Rehabilitation of the Medical and Chirurgical Faculty of Maryland (Med Chi).

14. On May 21, 1990, Respondent signed a Professional Assistance Treatment Contract with UMMS, which provided that EAP would collect random urine samples from Respondent once a week from May 21, 1990 to July 1, 1990.

15. On May 24, 1990, UMMS reinstated Respondent in the General Surgery Residency Program. On June 30, 1990, Respondent completed the five-year General Surgery Residency Program.

16. On June 25, 1990, Respondent signed a Treatment Contract with Whitfield Associates which specifies that Respondent will submit a urine sample once a week.

17. On July 17, 1990, UMMS offered Respondent a position as Endoscopy Fellow in Surgery for a period of one year. The fellowship expires June 30, 1991. Licensure in the State of Maryland is a condition precedent to Respondent's participation in the fellowship.

18. Writing prescriptions for Respondent's wife constitutes practicing medicine other than in connection with Respondent's postgraduate training program.

19. Writing prescriptions using fictitious names in order to obtain drugs for the prescriber's personal use constitutes making and filing false reports or records in the practice of medicine.

### Conclusions Law

Based upon the Findings of Fact, the Board concludes, as a matter of law, that Respondent committed the following prohibited acts:

1. Practicing medicine other than in connection with the unlicensed medical practitioner's postgraduate training program (COMAR 10.31.07.02B(2)(f); and

2. Willfully making and filing false reports or

records in the practice of medicine (COMAR 10.31.07.02B(2)(i)).

### Order

Based on the foregoing Findings of Fact, it is this first day of October 1990, by an affirmative vote of the majority of the full authorized membership of those members of the Board of Physician Quality Assurance of Maryland who considered this case,

ORDERED that Respondent's application for a license to practice medicine in the State of Maryland is GRANTED and Respondent is placed on PROBATION for a period of five years subject to the following conditions:

1. Respondent agrees to comply with all conditions of his Physician Rehabilitation Advocacy Contract which Respondent signed authorizing the Committee on Physician Rehabilitation of Med Chi to release any and all information to the Board whenever the Board requests any information.

2. Respondent agrees to comply with all conditions of his Professional Assistance Treatment Contract including authorizing the EAP at UMMS to release any and all information to the Board whenever the Board requests any information.

3. Mr. Robert K. White, Director, EAP, will make regular reports to the Board concerning Respondent's participation and submit copies of any and all urine screens. The reports are due October 1, 1990; December 1, 1990; February 1, 1991; and April 1, 1991.

4. Respondent agrees to comply with all conditions of his Treatment Contract with Whitfield Associates including authorizing Whitfield Associates to release any and all information to the Board whenever the Board requests any information.

5. During the period of Respondent's fellowship, Respondent agrees to write orders for controlled dangerous substances, when indicated, for inpatients and patients undergoing endoscopy, on the patients' charts.

6. During the period of Respondent's fellowship, Respondent agrees that he will not prescribe controlled dangerous substances for any individual, including outpatients, patients discharged from the hospital, himself, and his wife. In addition, Respondent agrees that he will not apply to the United States Drug Enforcement Administration (DEA) for a DEA Registration Number or the Maryland Division of Drug Control for a CDC Registration Certificate.

7. During the period of Respondent's fellowship, Respondent's supervisors will be Anthony Imbembo MD, Chief of the Department of Surgery; Carl Zucker MD; Robert Bailey MD; and Scott Graham MD. Drs. Imbembo, Zucker, Bailey, and Graham agree to report to the Board immediately if they believe Respondent is a danger to himself or to others, or that



he has used any drug or controlled dangerous substance.

8. Respondent shall continue to attend Narcotics Anonymous at least three times a week.

9. Beginning October 1, 1990, Respondent will give two supervised urine specimens per week on Mondays and Thursdays at 2:00 p.m. Respondent shall pay to Mr. White the amount of twenty dollars each time a urine specimen is collected on Mondays and Thursdays of each week for the duration of the protocol to cover the cost of performing each urine drug-screening test. In addition, the Respondent will pay twenty dollars to cover the cost of performing the secondary confirmatory test whenever a urine drug-screen test result is positive.

10. In the event that Respondent wishes to take a vacation or plans to leave the State of Maryland, Respondent must notify the Board of his intent in writing, at least one month prior to the vacation, using certified mail, return receipt requested. Respondent must arrange for supervised urine-testing twice a week at a facility approved by Mr. White whenever he leaves Baltimore. All vacations must be within the continental United States and either the Board, the Executive Committee, or the Monday Review Panel Committee must approve Respondent's request in advance.

11. In the event of an emergency which requires Respondent to be out of town, he must telephone J. Michael Compton, Acting Executive Director; Margaret T. Anzalone, Deputy Director; or Israel H. Weiner MD. After Respondent notifies one of the three persons mentioned, Respondent must send a letter to the Board, certified mail, return receipt requested, explaining the reasons for the emergency.

12. Respondent agrees that he will be responsible for all costs incurred under this Consent Order.

13. Respondent shall not violate any provisions of *MD Health Occ. Code Ann.* §§14-504 (1989 Cum. Supp.).

14. On or about June 1, 1991, Respondent will meet with representatives of the Board to discuss his future plans. At that time, any of these conditions of probation may be modified. This Order may continue in effect for five years, and it is further

ORDERED that if Respondent violates any of the conditions of probation specified by this Order, the Board will SUMMARILY SUSPEND Respondent's license. Within thirty days of the suspension, the Board will afford Respondent an opportunity for a hearing before the next regularly scheduled Board meeting; and it is further

ORDERED that this is a Final Order and as such is considered a public document pursuant to *MD State Govt. Code Ann.*, §§10-611.

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

## Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of twelve pages.

1. By signing this Consent, I hereby submit to this Order and its conditions.

2. I understand that if I fail to comply with the conditions set forth in this Order, the Board will revoke my license to practice medicine.

3. I am not represented by counsel at this time, but I understand both the nature of the matters against me and also this Consent Order fully. I make this decision voluntarily and knowingly.

JOHN L. FLOWERS MD

## Exhibit A

In the Matter of  
John Lee Flowers MD  
Before the  
Maryland Board of  
Physician Quality Assurance

### Charges Under the Maryland Medical Practice Act

Based on information received by the Maryland Board of Physician Quality Assurance (the Board), the Board hereby charges John Lee Flowers MD (the Respondent), under COMAR 10.31.07.02b(1) and (2)(e), (2)(f), and (2)(i).

The pertinent provisions of COMAR under which Respondent is charged provide as follows:

COMAR 10.31.07.02 B(1): After investigation, the Commission may revoke or suspend an unlicensed medical practitioner's right to practice medicine in the State, or place him or her on probation on prescribed conditions or reprimand him or her for any of the causes listed below as unprofessional conduct.

COMAR 10.31.07.02 B(2):

- (e) Immoral conduct of the unlicensed medical practitioner in the practice of medicine;
- (f) Practicing medicine other than in connection with the unlicensed medical practitioner's postgraduate training;
- (i) Willfully making and filing false reports or records in the practice of medicine.

The above disciplinary action is subject to COMAR 10.31.07.02C which provides that the Board may take disciplinary action only after a formal hearing at a regular or special meeting of the Board with a quorum of the Board members present and voting.

### Allegations of Fact

The Board bases its charges on the following facts that the Board has cause to believe are true:

1. Respondent is an unlicensed medical practitioner who is authorized to practice medicine in Maryland pursuant to *MD Health Occ. Code Ann.*, §14-302 (1988 Cum. Supp.). Pursuant to §14-302, the Board adopted regulations governing the practice of unlicensed medical practitioners.

2. COMAR 10.32.07.04 requires that the Chief of Service of the institution providing the postgraduate training program register each unlicensed medical school graduate with the Board.

3. The UMMS registered Respondent in its residency program in

General Surgery on or about July 1, 1984. Respondent continued in the residency program until he was suspended on October 22, 1988.

4. In September 1988, Detective Steven W. Maglidt of the Anne Arundel County Police Department conducted an audit of prescriptions written by Respondent and filed in the following pharmacies:

- a. Rite Aid, 7456 Ritchie Hwy., Glen Burnie
- b. Rite Aid, 312 Hospital Dr., Glen Burnie
- c. Rite Aid, Old Mill Rd. and MD Rt. 3, Millersville
- d. Revco, 661 Old Mill Rd., Millersville
- e. Giant, 7383 Baltimore-Annapolis Blvd., Glen Burnie
- f. Giant, 7940 Crain Hwy., Glen Burnie
- g. Giant, 6626 Ritchie Hwy., Glen Burnie
- h. Giant, 7927 Ritchie Highway, Glen Burnie
- i. Giant, 551 Ritchie Hwy., Glen Burnie

5. The audit revealed that Respondent wrote 129 prescriptions for Bontril, Valium, Tenuate, Hycodan, Soma Compound with Codeine, Vicodin, Percocet, and Oxycodone/Acetaminophen to Cindy Lyons, Cindy Daukantas, Mae Daukantas, Chris Buckley, Frank Fontaine, Jeffrey Shipley, Jeff Shipley, and Diane Buckley between November 23, 1985 and October 14, 1988.

6. On October 15 and 18, 1988, after being advised of his rights, Respondent gave statements to Detective Steven W. Maglidt, admitting that Jeff Shipley, Frank Fontaine, and Chris Buckley did not exist. When Respondent wrote prescriptions in the names of either Jeff Shipley, Frank Fontaine, or Chris Buckley, Respondent took the prescriptions to a pharmacy where he received the drugs for his personal use.

7. Respondent admitted that the purpose of writing prescriptions with the false names was to obtain drugs for "recreational" use.

8. Writing prescriptions for patients who do not exist and taking the prescription to a pharmacy where Respondent received the drugs constitutes willfully making and filing false records in the practice of medicine.

9. Writing prescriptions for patients who do not exist constitutes immoral conduct in the practice of medicine.

10. Respondent's wife is Cindy Daukantis Lyons. Respondent admitted to treating his wife for chronic bronchitis, low back pain, and weight control.

11. Respondent admitted that both he and his wife used Bontril, Hycodan, Percocet, and Vicodin for "recreational" use.

12. Writing prescriptions for Respondent's wife constitutes practicing medicine other than in connection with Respondent's postgraduate training program.

#### Notice of Possible Sanctions

If after a hearing, the Board finds the above allegations of facts to be true, the Board may revoke or suspend Respondent's right to practice medicine in the State or place Respondent on probation or reprimand Respondent.

#### Notice of Hearing, Pre-hearing Conference, and Settlement Conference

A hearing in this matter has been scheduled for April 5, 1988 at 10:00 a.m. in the Office of Administrative Hearings and Appeals, the O'Connor Building, 201 West Preston St., Baltimore, MD.

In addition, a settlement conference in this matter has been scheduled for March 8, 1989 at 12:00 p.m. in the O'Connor Building, Baltimore, MD, and a pre-hearing conference in this matter has been scheduled for March 22, 1989 at 9:00 a.m. in the Office of Administrative Hearings and Appeals, the O'Connor Building, Baltimore, MD. The nature and purpose of the settlement conference and the pre-hearing conference is described in a letter to the Respondent.

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

## In the Matter of Mark Davis MD Before the Maryland Board of Physician Quality Assurance

### Order for Summary Suspension of License to Practice Medicine

The Maryland Board of Physician Quality Assurance (the Board) herein sets forth the following background information as pertinent to this Order for Summary Suspension (the Emergency Suspension) with regard to the license of Mark Davis MD (the Respondent) to practice medicine in the State of Maryland:

1. Respondent is a physician licensed to practice medicine in the State of Maryland.

2. On October 24, 1990, the Board voted to summarily suspend Respondent's license to practice medicine in Maryland.

3. The Board's determination to summarily suspend Respondent's license was based upon the following information:

- a) Physician services deficiencies at Dukeland Nursing Home where Respondent was medical director and attending physician for certain patients.
- b) Interim Report (the Interim Report) of the Medical and Chirurgical Faculty Peer Review Committee (Med Chi PRC) dated July 2, 1990 which "concluded that there is evidence of instances of inappropriate care in [Respondent's] Dukeland Nursing Home practice..." and recommended an office practice review.\*
- c) Physician services deficiencies at Poplar Manor Nursing Home where Respondent is owner, medical director, and attending physician for all 157 patients.
- d) Report of practice review from Med Chi PRC dated October 3, 1990 (the October Report) which "concluded that there is evidence of instances of inappropriate care in [Respondent's] Dukeland Nursing Home practice, that [Respondent's] nursing home care, in general, is superficial at best, and that the outpatient care provided by [Respondent] is substandard for the practice of Internal Medicine."\*
- e) Report dated February 7, 1990 from Liberty Medical Center regarding continued restrictions on Respondent's privileges as a "result of a series of grossly negligent and substandard acts."

\* Health Occupations Article §14.602 and §14-601 require that reports of Med Chi PRC and a medical review committee be kept confidential and they are nondisclosable. Therefore, this report is not part of this public order but is included with Respondent's copy of the Summary Suspension.



f) Report dated October 17, 1990 from Meridian-Caton Manor Nursing Center revoking Respondent's privileges as attending physician because Respondent had not visited his patients since July 1990.

4. Based on information received by the Board, Respondent has a private office practice located at 9141 Baltimore National Pike. Respondent's practice is in the area of general Internal Medicine. In his private practice, Respondent sees approximately two to six patients weekly. Respondent has been engaged in the private practice of Internal Medicine since July 1981.

5. Based on information received by the Board, Respondent has privileges at Poplar Manor Nursing Home, Northwest Nursing Home, Armacost Nursing Home, Bon Secours Extended Care Facility, Liberty Medical Center, Bon Secours Hospital, Maryland General Hospital, and Howard County General Hospital. In addition, Respondent practices at certain domiciliary care facilities.

6. The majority of Respondent's practice involves treating patients in nursing homes. Based upon information received by the Board, Respondent has under his care 300 nursing home patients including twenty-nine patients at Northwest Nursing and Convalescent Center and 157 patients at Poplar Manor Nursing Home. Respondent also treats several patients in domiciliary care homes.

7. Beginning in February 1989, Respondent came under Board investigation in connection with his activities as medical director and attending physician at Dukeland Nursing Home.

8. As a result of a survey conducted May 24 to May 30, 1989 by the Office of Licensing and Certification (L&C), numerous deficiencies in the area of physician services were discovered. In particular, life-threatening deficiencies in the area of physician services were discovered with respect to Resident Nos. 88-067 and 87-021 for which Respondent was the attending physician. With respect to Resident 88-067, L&C found that Respondent had failed to assess an acute change in the patient's condition (elevated blood pressure). With respect to Resident No. 87-021, L&C found that Respondent had failed to note that a urine culture and sensitivity ordered on April 1, 1989 had not been performed as of May 30, 1989.

9. On or about July 2, 1990, Med Chi PRC reported "several instances that reflect serious consequences to [patients] as a result of reviews conducted of twenty patient charts at Dukeland Nursing Home." In general, the Interim Report found:

Each record [review] included a physical examination form which is a usual part of a nursing home record; however, the form for almost all patients was exactly the same. Skin sheets (nursing reports) included in each record were also uniform. The monthly notes consisted of a check-off list with no variation from one to the other, giving the appearance that physical contact was not made.

10. In the Interim Report, one peer reviewer noted as follows:

... progress notes are virtually 'pro forma.' They provide no interval information regarding the patient's status, include a perfunctory examination, no specific comments regarding laboratory information, and no indication of further treatment plan. There is no indication that the chart record has been reviewed, and there is never any comment regarding the interval problems [which may have been] experienced since the previous examination. Several of the charts reveal patients to have been hospitalized in the interim, and readmitted to the facility, without comment by [Respondent] as to the nature of the hospitalization or any interval note with respect to the diagnoses or treatment plans requiring adjustment as a result of this hospitalization.

The physician's orders are almost always telephone orders countersigned by the physician including the initial admission orders in every case. On several occasions, the [Respondent] saw the patient several days after admission to the facility.

Referring specifically to the requirements for a chart review as provided by the Peer Review Committee, I would summarize these requirements as they apply to all of these medical records as stating that in virtually every category, [Respondent's] records must be rated as inadequate. Legibility is variable, and the record does not allow for a rapid determination of the current medical status of the patient...

11. On September 18, 1990, a review of Respondent's office practice was conducted by Med Chi PRC. The conclusions are set forth in the October Report. The findings are consistent with the problems found at Dukeland Nursing Home. Specifically, the October Report found:

...that the randomly selected office records were difficult to read, poorly organized and reflected a lack of identification of patient problems...

An additional concern is the fact that [Respondent] has instructed hospitals not to provide them with any information (history, physical examination, pathology report, radiology report, etc.) concerning his patients' hospitalization. He stated that it is not his policy to accept this material nor his desire to maintain his files...

[Respondent] does not do any health maintenance procedures whatsoever, including performing true, comprehensive history and physical examinations and mammography for his female patients, and routine screening with sigmoidoscopy or stools for occult blood...

[Respondent] does not make any effort to maintain communication with referring or consulting physicians. He indicated that he does not contact previous treating physicians when their patients are admitted to his care at local hospitals; he does not feel that he has an obligation to follow patients seen in consultation beyond the need for immediate pre- and post-operative care when the patient is hospitalized; nor does he feel it is his responsibility to make sure that there is ongoing continuity of care for the medical problems of such patients when they are discharged.

12. On October 17, 1990, Poplar Manor Nursing Home was notified regarding several physician deficiencies at the facility. Respondent is owner, medical director, and attending physician for all 157 patients at Poplar Manor. Specifically, L&C found



that the following physician services requirements had not been met:

The facility has not provided for physician services that meet the residents' needs in providing for a total plan that includes maintaining physical function status and medication management of residents.

The [Respondent] has not supervised the residents' care in order to maintain or improve their highest practicable mental or physical function.

[With respect to Resident No 00738], physician services are deficient for continuing to prescribe a dose of Dilantin which had been demonstrated recently to be toxic.

[With respect to Resident No. 1786], physician services are deficient for not responding to an acute respiratory problem in a timely manner.

[With respect to Resident No. 1886], the [Respondent] failed to order Dilantin for a resident whom he believed clearly required it for approximately four weeks.

[With respect to Resident No. 1886], physician services are deficient for failure, on two occasions, to order Dilantin for a patient, who the [Respondent] obviously thinks requires it.

[With respect to Resident No. 1886], physician services are deficient for not ordering, for four days, insulin, for a brittle diabetic.

[With respect to Resident No. 1079], the [Respondent] was contacted and increased the Dilantin dose to 375 milligrams per day, a 150 percent increase from his previous dose. This order was started on July 1; there was no order to monitor the Dilantin level. On July 17, seventeen days after the Dilantin dose was increased by 150 percent, the resident developed lethargy and was hospitalized with Dilantin toxicity. Physician services are deficient for dramatically increasing Dilantin dose without monitoring the level.

[With respect to Resident No. 1886], physician services are deficient in not following up on a dangerously high serum potassium level for eight days.

[With respect to Resident No. 1915], physician services are deficient in that when the physician ordered serum electrolytes on July 23 for this resident known to develop hypokalemia in the past, it was his responsibility to determine the results of the test.

The above physician services deficiencies are not exhaustive of the findings from the L&C survey of Poplar Manor.

13. The cumulative information received by the Board since commencing its investigation of Respondent demonstrates that Respondent is not practicing in accordance with the accepted standards of an internist. In particular, the October Report and the finding of physician services deficiencies at Poplar Manor for the period October 2 to October 16, 1990, support the Board's finding that the public health, safety, or welfare imperatively require emergency action.

14. The Findings of Fact below set forth the deficiencies in care for specific patients which lead to the conclusion that the public health, safety, or welfare imperatively require emergency action.

### Findings of Fact

1. Based upon all the information received by the

Board in connection with its investigation including, but not limited to, the background information set forth above and incorporated herein, the Exhibits, and instances described in Paragraph 2 below, the Board has reason to believe that the following facts are true.

2. Respondent's treatment of his patients demonstrates a failure to meet the standard of care, unprofessional conduct, and professional incompetence in the following instances:

*Patient One:* On August 3, 1987, patient one was transferred from Liberty Medical Center where she was treated for syncope and urinary tract infection to Dukeland Nursing Home (Dukeland). Respondent was the patient's attending physician at Dukeland.

On August 5, 1987, Respondent completed a one-page standardized history and physical examination form. Respondent failed to note that the patient had a Foley catheter in place. In response to the category marked "skin (decubitus?)," Respondent wrote "see skin sheet." The skin sheet revealed a stage II decubitus ulcer on the left foot. On August 10, 1987, Respondent requested a surgical consultation for debridement of necrotic tissue on the left foot. On August 11, 1987, the skin sheet revealed a second decubitus ulcer, classified as stage II, on the inner aspect of the left foot. On August 12, 1987, Respondent completed a standardized progress note and described the skin condition as "good" despite the presence of two stage II decubitus ulcers. In order to write a progress note, a physician must examine the patient. It is apparent that Respondent failed to perform a physical examination before he completed the progress note because he described the skin condition as "good" when a physical examination would have revealed that the patient had two decubitus ulcers.

On August 6, 1987, a urinalysis report revealed white cells too numerous to count and heavy buddy yeast. Respondent failed to comment about the urinalysis results in the progress notes.

On August 11, 1987, Respondent was notified that the patient was unresponsive. On August 17, 1987, Respondent was notified that the patient's temperature was 100 degrees. Respondent ordered Tylenol 1 tablet when necessary for temperature above 100 degrees. On August 23, 1987 at 1:00 p.m., the patient was unresponsive; blood pressure was 40/20; the pulse was 70 and irregular; and the respirations were 18. Sometime later on August 23, 1987, the patient's temperature was 100 degrees. At 6:00 p.m., respirations were "slightly dyspneic" and the patient's color was fair. On August 24, 1987, the patient's temperature rose to 101.6 degrees. Respondent ordered Tylenol 2 tablets but did not appreciate the seriousness of the patient's symptoms in light of the patient's past medical history. Based on the patient's history of a urinary tract infection in the hospital, an untreated urinary tract infection at Dukeland, a recent hypotensive episode, and two instances of unresponsiveness,



the standard of care required Respondent to transfer the patient to an emergency room. Respondent failed to transfer the patient to an emergency room.

*Patient Two:* On September 14, 1988, patient two was transferred from St. Agnes Hospital where he was treated for hyponatremia to Dukeland. The patient had a history of seizures and hypertension, and was diagnosed as having chronic obstructive pulmonary disease (COPD). The patient was discharged from St. Agnes on the following medications:

Theragram 1 tablet every day;  
Theodur 300 mg three times a day;  
Catapres 0.1 mg three times a day; and  
Dilantin 100 mg three times a day.

On September 15, 1988, Respondent completed a one-page standardized history and physical examination form. On September 16, 1988, laboratory results revealed:

- a) red blood count of 3.39 (norm 4.4 to 6.0);
- b) hemoglobin 9.8 (norm 13.5 to 17.5);
- c) hematocrit 30.2 (norm 40 to 53);
- d) Dilantin level 8.4 mg/L (range 10 to 20); and
- e) Theophylline level 9.8 mg/L (range 5 to 20).

Respondent did not respond to the subtherapeutic Dilantin level until October 19, 1988 when he increased the Dilantin to 400 mg per day. Respondent failed to order a Dilantin level within one week after increasing the dose. Respondent's failure to order a Dilantin level in a timely manner resulted in a toxic Dilantin level of 33 on November 11, 1988.

Respondent failed to comment in the progress notes about the patient's abnormal red blood count, hemoglobin, and hematocrit values of September 16, 1988. Upon discharge from St. Agnes, the hematocrit was 35.7. The September 16, 1988 hematocrit of 30.2 represented a significant decrease which Respondent ignored. Respondent did not order a hemoglobin and hematocrit until December 20, 1988 which was too late under the circumstances. In addition, Respondent failed to order any diagnostic tests to determine the cause of the anemia. Respondent failed to order stools for occult blood.

On March 10, 1989, the Theophylline level was 2.5 which is less than therapeutic. On March 23, 1989, Respondent ordered a Theophylline level and discontinued the Theophylline. The results of the last Theophylline level are not in the chart. Respondent did not indicate why he discontinued the Theophylline. Since the patient had been diagnosed as having COPD, there is no indication to discontinue the Theophylline.

On March 26, 1989 at 3:00 p.m., the patient was sweating profusely and was short of breath; the blood pressures were 200/80 (right arm) and 220/100 (left arm). At 12:00 p.m., when the blood pressures were 200/110 (right arm) and 190/100 (left arm), the nurse called Respondent. At 1:15 p.m., Respondent ordered Lasix 40 mg. Respondent's treatment was below the

standard of care. The patient should have been sent to the emergency room. Respondent failed to recognize this medical emergency. Respondent failed to give instructions about monitoring the patient. Respondent failed to examine the patient. Respondent failed to ensure that his patient was attended to by another qualified physician in his absence. Respondent failed to have the patient transferred to a hospital emergency room when the patient's symptoms required immediate intervention. The patient died at 9:40 p.m.

Despite the patient's previous hospitalization in September 1988 for hyponatremia, Respondent failed to check the patient's sodium while the patient was at Dukeland. It is below the standard of care for the attending physician to fail to followup on a patient's problems which required a prior hospitalization.

*Patient Three:* Patient three sought treatment from Respondent at Respondent's office on May 10, 1988. The first note in the medical record is dated June 16, 1989 which indicated that Respondent ordered a refill of a prescription for Tetracycline. There is no indication why Respondent prescribed Tetracycline.

The chart does not contain a comprehensive history and physical examination.

Laboratory reports in the chart indicate that Respondent ordered blood tests on 7/7/88, 12/6/88, 4/11/89, and 8/22/89. Respondent failed to comment about any laboratory results in his progress notes.

There are several notes in the record from another physician who prescribed Calan-SR and Vasotec. There is no indication that Respondent followed the physician's treatment plan or advised the patient otherwise. Respondent failed to coordinate the patient's care with the other physician.

Respondent's failure to obtain a complete medical history, to conduct a complete physical examination, to coordinate the patient's care with other treating physicians, and to document his treatment of the patient all indicate that the care rendered by Respondent was below the standard of care.

*Patient Four:* Patient four sought treatment from Respondent at Respondent's office on February 14, 1990. Respondent failed to perform a comprehensive history and physical examination. Respondent noted that the patient had a history of seizures for twenty years and had been on Tegretol therapy. There is no further information about her seizure history; the date of her last seizure is important to make a decision whether Tegretol therapy should be continued. Respondent failed to order a Tegretol level before continuing the patient on Tegretol.

On February 14, 1990, Respondent ordered a complete blood count (CBC). The laboratory results showed:

white blood count - 32. (norm 4.3 to 10.5);  
granulocytes - 28 (norm 40 to 80); and  
atypical lymphocytes - 8 (norm 0 to 4).



On February 22, 1990, the date of the next office visit, Respondent failed to comment about the low white blood count which was potentially life-threatening. There is no indication that Respondent was aware that Tegretol can cause pancytopenia. *The Physicians' Desk Reference*, 1989 edition, cautions:

...complete pre-treatment hematological testing should be obtained as a baseline. If a patient in the course of treatment exhibits low or decreased white blood cell or platelet counts, the patient should be monitored closely. Discontinuation of the drug should be considered if any evidence of significant bone marrow depression develops.

Respondent failed to monitor the patient's blood count when he did not order serial CBCs.

On April 18, 1990, Respondent cleared the patient for cataract surgery "if lab normal." Respondent abrogated his responsibility for the patient's care by failing to alert the surgeon to the patient's abnormal lab results.

*Patient Five:* Patient five was transferred from Liberty Medical Center where she was treated for an infected stage III decubitus ulcer of the right heel to Dukeland on February 9, 1989. At the time of her transfer, she was receiving Coumadin 2.5 mg daily.

On February 9, 1989, Respondent completed a one-page standardized history and physical examination form. Respondent failed to indicate why the patient was receiving Coumadin. Respondent did not contact the patient's physicians at Liberty Medical Center to question the order for Coumadin or the previous coagulation studies. It is apparent from the history and physical that Respondent ordered Coumadin based on another physician's determination.

On February 10, 1989, the prothrombin time was 13.3 seconds with a control of 11.8 seconds for a ratio of 1.1. There is no indication in the progress notes to show that Respondent adjusted the Coumadin dose to achieve a level within the therapeutic range. There is no indication why Respondent selected a lower range than is customary.

*Patient Six:* Patient six was transferred from Liberty Medical Center (LMC) where he was treated for unresponsiveness, dehydration, and sepsis to Poplar Manor Nursing Home (Poplar Manor) on April 19, 1990. Upon discharge from LMC, the patient was receiving, among other medications, Dilantin 200 mg per day. On May 3, 1990, the Dilantin level was 12 (therapeutic 10 to 20). On July 16, 1990, the Dilantin level was 3.5 which is below the therapeutic level. According to the nurse's notes, on July 18, 1990, Respondent did the following:

ordered Dilantin 200 mg stat;  
discontinued Dilantin 100 mg bid;  
ordered Dilantin 100 mg tid; and  
ordered a Dilantin level in two weeks.

Respondent should have repeated the Dilantin level

immediately to verify the accuracy of the 3.5 level and ordered a Dilantin level within a few days to assess whether the serum level rose to a therapeutic level based on the increased dose. Respondent's failure to monitor the Dilantin level led to the patient's transfer to the emergency room at Maryland General Hospital (MGH) on July 27, 1990 for Dilantin toxicity. On admission to MGH, the Dilantin level was 32.2. The emergency room physician ordered: "No Dilantin until Sunday, then only 100 mg bid." The patient returned to Poplar Manor on July 28, 1990 and Respondent ordered Dilantin in accordance with the emergency room physician's plan.

However, on August 1, 1990, Respondent ordered Dilantin 300 mg per day, a dose which had caused toxicity only six days earlier. Respondent continued to prescribe Dilantin 300 mg per day until a surveyor questioned the dosage. Respondent should have ordered a Dilantin level within one week after the patient returned to Poplar Manor on July 28, 1990 and assessed the efficacy of his treatment plan. Respondent did not order a Dilantin level until October 4, 1990. Respondent's failure to monitor the Dilantin level subjected the patient to a toxic level of Dilantin for thirty-nine days as evidenced by the Dilantin level of 21 on October 5, 1990.

Respondent's monthly progress note dated August 2, 1990 did not refer to the reason for the patient's recent hospitalization except to comment that the "Dilantin levels in the hospital were very satble [sic]." In addition, Respondent noted that the "Dilantin level was 3.2" when the level was 32.2.

Respondent's monthly progress note dated August 2, 1990 is typewritten and pasted over an entry handwritten by Respondent and dated August 20, 1990. If Respondent did not see the patient until August 20, 1990 as the handwritten entry indicated, Respondent failed to provide appropriate care to the patient. Respondent should have examined the patient when Respondent assumed responsibility for the patient's care on July 28, 1990 after the patient was hospitalized. If Respondent's note dated August 20, 1990 was written on the wrong patient, Respondent should have lined through the entry, labeled it "ERROR" and signed his name. It is below the standard of care to alter a medical chart in such a manner that the observer cannot read an entry.

*Patient Seven:* Patient seven was admitted to Poplar Manor in December 1989 with the diagnoses of diabetes, schizophrenia, dementia, and an enucleated left eye. The patient was hospitalized from May 13, 1990 to May 31, 1990 to rule out a cerebrovascular accident. While hospitalized, the patient received Dilantin. The hospital discharge summary states:

EEG showed diffuse encephalopathy of moderate degree. This patient was observed to have muscle activity and also she has extensive infarct. It was decided to put the patient on Dilantin and the dosage was adjusted carefully. The Dilantin



level on 5/23 was 16.8. The one on 5/30 is still pending. If there is any change on 5/30/90, we will inform the nursing home.

Upon readmission to Poplar Manor on 5/31/90, Respondent failed to order Dilantin for the patient who had a history of seizures. On June 27, 1990 at 2:00 p.m., Respondent ordered Dilantin 400 mg immediately and at 12:00 a.m., to be followed by Dilantin 300 mg per day. Respondent ordered a Dilantin level in one week. By prescribing a loading dose to achieve a rapid serum level of Dilantin, Respondent acknowledged the potential for seizures. It is below the standard of care to fail to order Dilantin for four weeks for a patient who had been receiving Dilantin.

On July 8, 1990, the patient was transferred to Liberty Medical Center for atrial fibrillation with rapid ventricular response and hypoglycemia (glucose 26). Respondent's admission note revealed the following information:

Physical Examination: Her pupils are sluggish, but reactive. She has bilateral arcus senilis...

Arcus senilis is a ring of depigmentation around the iris of the eye found in many elderly people. The patient's left eye had been removed; she had an artificial left eye. An "arcus senilis" may have been painted on the prosthesis for cosmetic purposes; however, an artificial eye does not react to light. If Respondent had examined the left eye, he would have found it was enucleated. Respondent failed to examine the patient's eyes prior to dictating the admission notes.

On July 13, 1990, the Dilantin level was 27 (therapeutic 10 to 20); on July 5, 1990, the Dilantin level was 19. The patient returned to Poplar Manor on July 17, 1990. Respondent telephonically ordered Dilantin 200 mg per day and a Dilantin level every three months. Respondent should have ordered a Dilantin level within one week after the patient returned to Poplar Manor.

The patient's chart contains a Pharmacy Recommendation Sheet. On August 11, 1990, the pharmacist noted:

Dilantin toxic in hospital (7/13);  
dose lowered;  
suggest repeat level.

Respondent did not order a Dilantin level as suggested but maintained the patient on Dilantin 200 mg per day.

Respondent did not perform a history and physical when the patient was readmitted to Poplar Manor on July 17, 1990; Respondent did not write a progress note until August 20, 1990. Respondent's failure to examine the patient until thirty-four days after he assumed responsibility for the patient is below the standard of care.

On August 30, 1990, the serum potassium was 6.2 (norm 3.7 to 5.3). Respondent ordered a stat repeat potassium level but it was not performed until eight days later on September 9, 1990. A high potassium

level can cause cardiac arrhythmias and death. Respondent failed to treat this medical emergency. When the patient was admitted to Liberty Medical Center on September 10, 1990 after being found lethargic and unresponsive, Respondent failed to alert the hospital physician of the patient's hyperkalemia because Respondent did not record this episode in his admission note.

The patient, readmitted to Poplar Manor on September 25, 1990 at 1:00 p.m., had a history of recent hospitalization for hypoglycemia. (The patient was transferred to Maryland General Hospital emergency room on June 2, 1990 for evaluation of hypoglycemia.) Respondent failed to order insulin. On September 27, 1990 at 6:20 p.m., the patient's glucose level was 425 (norm 65 to 115). Respondent ordered ten units of Regular insulin. At 10:00 p.m., a chemstick revealed a glucose level of 240. Respondent ordered five units of Regular insulin and a fasting blood sugar (FBS) in the morning. On September 28, 1990, the patient's glucose level was 118. Respondent did not order insulin on September 28, 1990. On September 29, 1990, at 10:00 p.m., the glucose level was 438. Respondent ordered five units of Regular insulin immediately and daily. Respondent failed to order insulin for a brittle diabetic upon admission to Poplar Manor and on a regular basis until four days later, during which time the patient suffered three known episodes of hyperglycemia. Hyperglycemia can cause death.

Respondent failed to perform a history and physical examination upon the patient's readmission to Poplar Manor on September 25, 1990. Respondent did not write a progress note until October 2, 1990. Respondent failed to order Dilantin on September 25, 1990. On October 10, 1990, the Pharmacy Recommendation Sheet indicates that the pharmacist noted: "Readmitted 9/25, Dilantin not on admission order."

On October 14, 1990, Respondent wrote: "no seizure, off Dilantin." If Respondent planned to discontinue the Dilantin on September 25, 1990, Respondent should have instructed the nursing staff to monitor the patient for seizure activity. Respondent did not discuss his plan to discontinue Dilantin in the progress note dated October 2, 1990. Respondent failed to comment about the patient's lack of seizure activity in the progress note on October 2, 1990.

*Patient Eight:* Patient eight was transferred from Maryland General Hospital (MGH), where she was treated for rectal and vaginal bleeding, to Poplar Manor on January 2, 1990. Past medical history included diagnoses of cervical cancer and anemia. The patient was fed via a gastrostomy tube.

On July 19, 1990, the nurse's note described the patient as alert and awake. No changes in the patient's status were noted until July 25, 1990 at 2:00 p.m. when the patient became lethargic. At 10:00 p.m., the patient continued to be lethargic but responded to tactile stimulus. On July 26, 1990 at 1:00 a.m., the

patient "responded slowly" to verbal and tactile stimulus. Vital signs were recorded as:

Temperature	100.9 degrees;
Pulse	64;
Respiration	18; and
Blood pressure	140/80.

At 2:00 a.m., the patient's temperature rose to 101.6 degrees. At 2:20 a.m., Respondent telephonically ordered Tylenol for temperature above 100 degrees and advised continued observation. Tylenol was given at 2:25 a.m. At 5:00 or 6:00 a.m., the patient's temperature was 101 degrees. Tylenol was given. The patient remained lethargic and her skin was hot and dry. At 8:15 a.m., the vital signs were recorded as:

Temperature	101.2 degrees;
Pulse	102; and
Respiration	22.

A minute amount of yellow phlegm was suctioned. At 10:15 a.m., patient's temperature was 100.8 degrees, pulse was 142, and respirations were 22. At 10:30 a.m., Tylenol was given. At 12:00 p.m., the vital signs were recorded as:

Temperature	100.8 degrees;
Pulse	70;
Respiration	20; and
Blood pressure	148/70.

At 2:00 p.m., Tylenol was given. At 6:00 a.m., on July 27, 1990, the vital signs were recorded as:

Temperature	102;
Pulse	76;
Respiration	20; and
Blood pressure	118/84.

At 10:00 a.m., Tylenol was given for a temperature of 101.6 degrees (rectally). At 12:00 p.m., putrid yellowish material with a foul odor was suctioned. The temperature was 101 degrees (rectally). At 1:00 p.m., Respondent telephonically ordered that the patient be transferred to the emergency room for evaluation. Based on the patient's clinical symptoms of lethargy, an elevated temperature which did not respond to Tylenol, a tachycardiac pulse, and yellow foul-smelling secretions, Respondent should have sent the patient to the emergency room within twelve hours after the change in the patient's condition. Respondent failed to appreciate the seriousness of the patient's condition because he did not examine the patient within twelve hours after the change in the patient's condition. The symptoms of elevated temperature, rapid pulse, and thick secretions suggest pneumonia which is a common cause of death in the elderly population.

Patient eight remained at Liberty Medical Center until August 10, 1990 when she was readmitted to Poplar Manor. The patient remained at Poplar Manor from August 10, 1990 until September 6, 1990. However, a typewritten progress note dated August 16, 1990 and signed by Respondent on August 21, 1990 states:

patient in hospital at this time;  
transfer summary and discharge summary to follow on patient return on August 17, 1990.

It is obvious that Respondent did not examine the patient prior to dictating and signing the progress note because the patient remained at Poplar Manor from August 10, 1990 until September 6, 1990. It is below the standard of care to write a progress note without examining the patient. Respondent's note demonstrates that he did not know where his patient was on August 16, 1990.

On September 5, 1990 at 9:25 p.m., the nurse's note indicates:

suctioned for third time;  
experiencing SOB [shortness of breath];  
VS 118/60, 100.2 degrees - 100 (irregular) - 49

The nurse administered oxygen and called Respondent. Respondent did not initiate a treatment plan. The increased pulse and respiration indicated an acute change in the patient's condition. Respondent did not initiate a treatment plan. The standard of care requires a physician to perform a physical assessment immediately, since Respondent had not seen the patient since July 19, 1990. At 10:21 p.m., the nurse's note indicates that the patient was "lying in bed and cont [continued] to have labored breathing." At 11:30 p.m., the patient was sent to Liberty Medical Center where the patient was diagnosed as having renal failure, respiratory failure, and right lower lobe pneumonia. Respondent failed to act in a timely manner, failed to examine the patient, and failed to send the patient to the emergency room as soon as he was aware of the acute change in the patient's condition.

*Patient Nine:* Patient nine sought treatment from Respondent at Respondent's office on January 12, 1988. The chart does not contain a comprehensive history and physical examination. There is no detailed past medical history. There is no reason why the patient sought treatment. The first entry in the chart is: "HBP [high blood pressure] Diabetes." The only vital sign recorded is a blood pressure reading. Respondent lists four medications: Diabinese, Aldomet, Chlorthalidone, and Synthroid. Respondent's failure to formulate a treatment plan makes it impossible to ascertain whether the patient had been taking these drugs or whether Respondent made a decision to prescribe them. There is nothing to suggest Synthroid was indicated. Respondent failed to order thyroid function tests (TFTs) to establish a diagnosis of hypothyroidism. Respondent ordered TFTs twelve months after prescribing Synthroid. It is below the standard of care to prescribe a slow-acting thyroid medication such as Synthroid and wait twelve months before ordering laboratory tests to assess the efficacy of the treatment.

On August 10, 1989, lab results revealed the following:



Triglyceride	427	(range 20 to 190)
Thyroxin	<0.6	(range 4.5 to 11.5)
R-T3 uptake	26.87	(range 25 to 39)
Free Thyroxin Index (T7)	<0.2	(range 1.1 to 4.5)

On August 15, 1989, Respondent noted: "Synthroid needed" and ordered "0.25 x 2 today then 0.25 qd [everyday]." Since Synthroid is a slow-acting drug; it is not used to treat hypothyroidism on an emergency basis. Respondent's prescription of two Synthroid tablets in this situation reveals that Respondent failed to appreciate the severity of the clinical symptoms. Respondent endangered the patient's life by failing to address this situation. Since the patient refused an endocrinology consultation, Respondent should have monitored TFTs every two weeks and followed the patient closely.

Laboratory results in the chart reveal the following results:

Date	Glucose
1/12/88	158
3/3/88	172
9/27/88	179
12/20/88	227
3/21/89	236
4/18/89	196
6/20/89	164
8/10/89	195
9/12/89	277
12/5/89	151
6/19/90	141

Despite the elevated blood sugars (range 65 to 115), Respondent failed to discuss the findings in the progress notes or to assess the adequacy of his treatment plan.

Respondent did not recommend any screening studies despite his treatment of the patient for two and one-half years.

*Patient Ten:* Patient ten was transferred from Liberty Medical Center (Liberty), where he was treated for dehydration, a urinary tract infection, and uncontrolled diabetes, to Dukeland Nursing Home on February 20, 1987. At Liberty, the patient had been receiving twelve units of NPH insulin daily. On February 20, 1987, Respondent telephonically ordered twenty-five units of NPH insulin daily and fasting blood sugars (FBS) monthly. On February 22, 1987, Respondent completed a one-page standardized form but he failed to perform a comprehensive history and physical examination. In addition, Respondent failed to discuss why he increased the insulin dose. The standard of care requires Respondent to check the FBS within twenty-four hours of changing the insulin dose. Respondent's failure to monitor the FBS more than once a month caused a dangerously low FBS on March 10, 1987 of 42 (norm 65 to 115).

On March 11, 1987, the patient was transferred to Liberty for a hypoglycemic reaction secondary to insulin therapy. When the patient returned on March 25, 1987, Respondent failed to formulate a treatment

plan to prevent a similar occurrence. Respondent did not order insulin. Respondent failed to indicate why he decided to treat the patient without insulin. Respondent ordered an FBS every three months. Based on the patient's history and recent hospitalization, Respondent should have monitored the patient's glucose level on a weekly basis to assess whether the FBS increased without insulin.

An undated urinalysis reveals that there were white cells too numerous to count. A review of the physician's orders and the progress notes failed to show a response by Respondent to the abnormal urinalysis, such as a culture or an order for antibiotics. In light of the patient's history of urinary tract infections, Respondent should have initiated appropriate treatment or commented why treatment was not provided.

On March 22, 1989, the patient was admitted to Maryland General Hospital for dehydration, gastrointestinal bleeding, and to rule out urinary tract infection. While hospitalized, the patient had a positive culture for acid-fast bacilli. According to the nurse's notes in response to a recommendation by a physician from Maryland General Hospital on August 2, 1990, Respondent telephonically ordered Rifampin, Pyrazinamide, and a sputum culture in two weeks. Respondent failed to comment in the progress notes why he initiated this treatment. Respondent failed to appreciate the patient's symptoms and perform a physical examination.

On August 4, 1989, the patient was transferred to Maryland General Hospital for treatment of pneumonia.

*Patient Eleven:* Patient eleven first sought treatment from Respondent in Respondent's office on June 2, 1982. The first note in the chart is dated December 10, 1987. Respondent continued to see the patient through October 4, 1990.

Respondent failed to perform a comprehensive history and physical examination during the eight years he saw the patient. A review of the progress notes reveals that Respondent did not assess the patient's symptoms and formulate a treatment plan. Accordingly, Respondent did not provide continuity of care despite the patient's regular visits to Respondent. There are no follow-up plans noted in the record.

Respondent failed to recommend standard screening examinations, such as mammography, stools for occult blood, and sigmoidoscopy.

The Respondent's overall medical management of this patient did not meet the standard of care for a treating physician.

*Patient Twelve:* Patient twelve was transferred from Maryland General Hospital, where he was treated for sepsis, pneumonia, urinary tract infection, and dehydration, to Dukeland Nursing Home (Dukeland) on March 4, 1988. Respondent completed a standardized one-page history and physical examination

form in which he listed the above-mentioned diagnoses and included the diagnosis of seizure disorder. Respondent failed to order Dilantin or explain his treatment approach. On March 7, 1988, the patient had a grand mal seizure. The nurse's note reveals that Respondent saw the patient and stated: "if the patient experiences another seizure activity, call me for possible placement back on Dilantin medication treatment." Respondent failed to document his examination and assessment of the patient in the progress note. The next progress note, dated March 21, 1988, does not refer to the seizure activity.

On July 16, 1986, the patient had another grand mal seizure. Respondent ordered Dilantin 300 mg daily. A Dilantin level was not drawn until July 23, 1988 when the level was 9.3 which is less than the therapeutic value of 10 to 20. Respondent should have ordered a Dilantin level to be drawn within forty-eight hours after therapy was initiated in order to evaluate the blood level of Dilantin and prevent another seizure. A Dilantin level on August 2, 1988 was within the therapeutic range. Respondent failed to order another Dilantin level during the remainder of the patient's stay at the nursing home through December 2, 1988.

On December 9, 1988, the Dilantin level was less than 2.5. On December 9, 1988 and December 14, 1988, Respondent discontinued the Dilantin. On January 12, 1989, the patient had a seizure. Respondent ordered Dilantin medication and a Dilantin level to be drawn in two days. On January 14, 1989, the level was within therapeutic range. Respondent failed to order another Dilantin level prior to the patient's transfer to another nursing home on February 22, 1989.

Respondent's failure to monitor the Dilantin level is below the standard of care for a physician who prescribes Dilantin to a patient who had recently experienced three seizures.

*Patient Thirteen:* Patient thirteen was transferred from Liberty Medical Center, where she was treated for recurrent decubitus ulcers, to Dukeland Nursing Home on March 2, 1988.

Respondent completed a one-page standardized history and physical examination form in which Respondent listed the patient's chief complaint as status post flap. In response to the category labeled "skin," Respondent wrote: "see skin sheet."

The skin sheet shows the location of five decubitus ulcers on March 2, 1988. However, in a progress note, Respondent described the skin condition as "good." In order to write a progress note dated March 21, 1988, a physician must examine the patient. It is apparent that Respondent failed to perform a physical examination before he completed the progress note because he described the skin condition as "good" when a physical examination would have revealed that the patient had five decubitus ulcers. Respondent failed to comment in the progress note about the sacral flap which had become infected, and the remaining decubitus ulcers.

*Patient Fourteen:* Patient fourteen was admitted to Poplar Manor on November 16, 1989 with diagnoses of anemia and congestive heart failure. On April 5, 1990, the patient received a pacemaker. On October 1, 1990, a pacemaker check indicated that the pacemaker was functioning properly. However, on October 20, 1990 at 3:40 a.m., the patient "was holding chest as if in pain or some discomfort." The patient's vital signs were recorded as follows:

Temperature	99 degrees (rectally);
Pulse	80 irregular;
Respiration	28; and
Blood pressure	140/70.

At 4:11 a.m., the patient was transferred to Liberty Medical Center where she was evaluated. The emergency room physician's impressions noted shortness of breath, and ruled out congestive heart failure. The patient's pulse fluctuated between 82 and 101. The patient was placed on oxygen. An electrocardiogram (ECG) revealed the following information:

undetermined rhythm;  
left axis deviation;  
nonspecific intraventricular block;  
cannot rule out anteroseptal infarct, age undetermined;  
T wave abnormality, consider lateral ischemia; and  
abnormal ECG.

Respondent disagreed with the emergency room physician's assessment and wrote the following information on the emergency room record:

she didn't have CHF;  
SOB anxiety syndrome;  
possible bronchospasm; and  
chronic fatigue.

Respondent transferred the patient to Poplar Manor at 10:45 a.m. According to the nurse's note, no additional orders were written.

Despite the patient's symptoms and the ECG results, Respondent failed to instruct the nursing staff at Poplar Manor to monitor the patient closely. Respondent should have ordered that no rectal temperature be taken. Respondent's impression of bronchospasm is not supported by the patient's clinical picture. Bronchospasm does not cause pain.

There is no objective data to support Respondent's impression of anxiety syndrome. It is unclear from the record whether Respondent saw the patient at the emergency room or at the nursing home. However, Respondent did not record the results of a physical examination performed at either location in the record.

According to the patient's chart, there were no nursing notes written on this patient from October 27, 1990 at 2:00 p.m. until the patient stopped breathing on October 30, 1990 at 3:10 p.m. In addition, there are no progress notes.

Respondent's failure to obtain a complete medical history, to conduct a complete physical examination, to coordinate the patient's care with other treating



physicians, and to document his treatment of the patient all indicate that the care rendered by Respondent was below the standard of care.

3. On November 2, 1990 at 11:00 a.m., Respondent was notified of the Board's vote to summarily suspend his license and given an opportunity to surrender his license before the close of business on November 2, 1990, in lieu of the Board's execution of the Order for Summary Suspension.

4. Respondent's retention of a license to practice medicine in Maryland and his ability to continue to treat patients poses a grave risk and imminent danger to the public health, safety, and welfare of the citizens of the State of Maryland.

5. In several instances, as mentioned in Paragraph 2 above, Respondent demonstrated an inability to comprehend the importance of documenting and interpreting significant laboratory results.

6. Respondent subjected his patients to unnecessary risks by failing to prescribe drug therapies which were indicated by the patient's clinical picture.

7. Respondent posed a grave risk to his patients in several instances, as mentioned in Paragraph 2 above, when he failed to respond appropriately to emergency situations.

8. Respondent's inability and/or unwillingness to appropriately manage his patient's drug therapies represents a grave risk and imminent danger to his patients. On several occasions, as documented in Paragraph 2 above, Respondent mismanaged the treatment of patients for whom he prescribed Theophylline, Coumadin, Tegretol, Dilantin, Insulin, and Synthroid.

Based upon the above information, the Board has reason to believe that Respondent has violated *MD Health Occ. Code Ann.*, §§14-504(a)(3), (4), and (22) (1990 Cum. Supp.).

The pertinent provisions of §14-504(a) provide:

- (a) Subject to the hearing provisions of §14-505 of the subtitles, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licenses on probation, or suspend or revoke a license if the licensee:

- (3) Is guilty of immoral or unprofessional conduct in the practice of medicine;
- (4) Is professionally, physically, or mentally incompetent; or
- (22) Fails to meet appropriate standards as determined by appropriate peer review for the delivery of quality medical... care performed in an outpatient surgical facility, office, hospital, or any other location in this State.

### Conclusions of Law

Based upon the foregoing facts, the Board finds that the public health, safety, and welfare imperatively require emergency action in this case, pursuant to *Maryland State Government Annotated Code* §10-405(b) (1984).

### Order

It is this second day of November 1990 by the Maryland Board of Physician Quality Assurance:

ORDERED that pursuant to the authority vested in the Board by the *MD State Govt. Code Ann.*, §10-405(b) (1984), Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this ORDER, Respondent shall immediately deliver or have delivered to the Board:

- (1) his original Maryland license from the Board of Medical Examiners;
- (2) his renewal card for his license to practice medicine from the Board of Physician Quality Assurance;
- (3) his U.S. Drug Enforcement Administration Registration Certificate;
- (4) his Maryland Controlled Dangerous Substances Certificate; and
- (5) any prescription pads on which his name and DEA number are imprinted;

ORDERED that a copy of the Order shall be filed with the Board in accordance with *MD Health Occ. Code Ann.*, §14-507(d) (1989 Cum. Supp.)

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

## March is Music In Our Schools Month

March has been designated as Music In Our Schools Month by the Music Educators National Conference. During this time, children, teachers, parents, community leaders, and music lovers everywhere celebrate the importance of music. The theme for 1991 is "A World in Tune," which highlights the global impact of music and its universality to the human experience.

The centerpiece of the celebration is the World's Largest Concert, to be broadcast over PBS stations Thursday, March 7, from 1:00 to 1:30 p.m. The concert will originate from Walt Disney World's EPCOT Center and be hosted by Grammy Award winner, Marilyn McCoo. Organizers hope to break last year's record of more than eight million participants in this televised sing-along.

Med Chi's Music Medicine Clearinghouse Committee is arranging a viewing of the concert for interested members, staff, and friends. For further information, please contact Susan Harman, Clearinghouse Coordinator, at 301-539-0872.

"THE BEST CARE ANYWHERE"

## Advanced-Care AMBULANCE



**665-0550**

RADIO DISPATCHED  
CLEAN MODERN VEHICLES  
24 HOURS A DAY - 7 DAYS A WEEK  
FULLY LICENSED EMERGENCY MEDICAL TECHNICIANS  
LOCAL AND LONG DISTANCE TRANSPORTS  
WE BILL MAJOR INSURANCE COMPANIES  
MEDICARE AND MEDICAID APPROVED

LOCATED IN THE  
MITCHERLING BUILDING • 9413 HARFORD RD.



### MARYLAND KIDNEY STONE CENTER

- Extracorporeal Shock Wave Lithotripsy
- New Physician Incentives
- Convenient Patient Scheduling
- On-site Pre-Admission Testing
- Convenient Location

For Further  
Information  
Contact  
**ALAN WEISMAN**  
ADMINISTRATOR  
301-377-2622

6115 Falls Road • Baltimore, Maryland 21209

A joint venture of five participating hospitals:

Greater Baltimore Medical Center, Sinai Hospital of Baltimore,  
Union Memorial Hospital, Johns Hopkins Medical Institutions and the  
University of Maryland Medical System.

## EDITORIAL EDITORIAL EDITORIAL

### The Patient's Advocate

I am tired of hearing everyone claim to be the "patient's advocate." Medicare claims it. The Blues claim it. Many HMOs claim it. Several hospitals claim it. Victor Cohn claims it. Other consumer advocates claim it. I suspect even the Board of Physician Quality Assurance claims it.

Not true, folks.

The word advocate comes from the Latin *advocatus*: "a counselor" (which stems from *ad vocare*: "to call"). The word patient is derived from the Latin *pati*: "to endure." It is cognate with *passio*: "a suffering" - which ultimately derives from the Greek *pathos*. A "patient's advocate" gives counsel to one who suffers - to one who has called.

I am the one called. At three in the afternoon or three in the morning I am at his side. I ask the probing questions, observe the subtlety of facial expression, auscult the faint aortic diastolic whiff, palpate the soft barely enlarged spleen, anticipate the grave diagnosis, order the confirmatory test, begin the relevant therapy. I am the one who agonizes over his failure to respond, I am the one who spends hours interpreting clinical findings, educating the family and anguishing with them.

And in the end, I am the last to surrender him to his God.

I am the patient's advocate.

I am his sword and his shield.

I am the ultimate, definitive, exhaustive, and irrevocable advocate for his life.

I am his physician.

Those others are all pretenders to the title.

BARTON J. GERSHEN MD  
Rockville

### Medical Newsletter On HOW TO PASS BOARD OF INTERNAL MEDICINE

To Be Mailed From March To August 1991

For a FREE Sample Copy

Mail Your Address Card To:

Medical Newsletter

5 Cullen Drive, West Orange N.J. 07052.



### Medical Advertising

Medical advertising in the *Yellow Pages* with reference to the Baltimore metropolitan area was the subject of a Commentary in this journal in June 1988.<sup>1</sup> The review unearthed that evidence of certification could not be found for 103 of 316 (32.6 percent) of the doctors who claimed specialization, perhaps with the tacit suggestion that they might be board certified.

Med Chi subsequently formed a Committee on Specialist Identification to review the allegations of all doctors proclaiming specialist status. The resolution of this problem was expected to be difficult. Judgment, moreover, hinged upon the assumption that a difference does not really exist between board certification and specialist as defined by the State.

The Maryland Medical Practice Act, in *Health Occupations Article*, §14-704, Specialists, reads "A physician may not represent to the public that the physician is a specialist in any field of specialized medical practice unless identified as a specialist in that field by the Board."<sup>2</sup> The Board of Physician Quality Assurance (BPQA) could, if necessary, define the qualifications of the physician seeking specialist status. One of the criteria was representation to the public in an ethical manner that the applicant was a specialist before July 1, 1984.

A review of the current *Yellow Pages*,<sup>3</sup> the *Directory of Medical Specialists*,<sup>4</sup> its supplement,<sup>5</sup> and the *American Medical Directory*<sup>6</sup> was made. A total of 749 individuals was encountered who were specialists or who limited their practices: 579 (73.3 percent) were certified and 170 (27.7 percent) were not. A slight lowering of the non-certified group from the previous review was noted but the statistics were essentially the same.

A patient expecting certification in this group would have been misled. A physician who may have failed his/her certification examination but has been in the specialty since before 1984 may well be allowed to advertise as a specialist. The Committee on Specialist Identification should have knowledge of whether the non-certified doctor has attempted specialty board examinations and if failure resulted. Such an individual should not be granted specialty status. The Committee will have to find a sorely-needed solution to this problem. If they do not, the Board of Trustees at the individual hospital may have to pass judgment upon who may be a specialist. This action would be far removed from the original intention of having Specialty Boards make such decisions.

As long as the physician does not use the word "specialist," the BPQA cannot interfere with the advertising. The implication may still exist, however, if the doctor states that a restriction of practice to a particular specialty exists.

The Committee on Specialist Identification, concerned with the problem, faces another legal obstacle. Does an invasion of privacy occur if the Committee asks the advertising "specialist" if specialty boards have

been taken and the result of such examinations? In such situations, the candidate may relate that he/she is board eligible. Such a status does not exist as the doctor has either passed the boards or not. If medicine must have quality assurance, the place to start is with the physician.

### References

1. Miller JM, Medical Advertising. *Md Med J* 1988;37:451-452.
2. Health Occupations Article, §14-704, Annotated Code of Maryland.
3. Chesapeake and Potomac Telephone Company of Maryland. Greater Baltimore Metropolitan Area *Yellow Pages* 1989:679-714.
4. Directory of Medical Specialists, 23rd edition. Wilmette: Marquis Who's Who, Inc. 1988-1989:5075.
5. Supplement to Directory of Medical Specialists, 23rd edition. Wilmette: Marquis Who's Who, Inc. 1988-1989:1456.
6. American Medical Directory of Physicians in the United States, Puerto Rico, Virgin Islands, and U.S. Physicians Temporarily Located in Foreign Countries. Chicago: American Medical Association 1988:5524.

JOSEPH M. MILLER MD  
Baltimore

### Commentary: Medical Advertising

The Maryland General Assembly has established that a physician's license may be suspended or revoked if the physician advertises in violation of rules and regulations of the Board of Physician Quality Assurance.<sup>1</sup> Board regulations require a physician to be identified by the Board as a specialist in a particular specialty before the physician may represent to the public that he or she "is specializing in any practice of medicine or limiting the physician's practice of medicine to any specialty."<sup>2</sup> In order to be identified as a specialist, a physician *must* apply to the Board of Physician Quality Assurance.

A physician who is certified by a specialty board approved by the American Board of Medical Specialties or who has "fulfilled the requirements to attain eligibility to take" a specialty board examination, may be identified directly by the Board of Physician Quality Assurance as a specialist.<sup>3</sup> If a specialty does not have a residency training requirement or a board examination, or if the physician has not taken an available full residency program, he or she may still be identified by the Board of Physician Quality Assurance as a specialist on the recommendation of the Board's medical review committee.<sup>4</sup>

### References

1. Health Occupations Article, §14-504(a)(5), and §14-604, Annotated Code of Maryland.
2. Code of Maryland Regulations (COMAR) 10.32.09.11.
3. COMAR 10.32.09.06A(1).
4. COMAR 10.32.09.06A(2).

STEPHEN C. BUCKINGHAM, Esq.  
Rifkins, Evans and Silver; Legal Counsel for Med Chi



■ ■ ■

### Lyme Disease

The July 1990 issue of the *Maryland Medical Journal* printed a letter written by me the previous January. That letter is in need of an update.

The letter raised two main issues. The first was to alert physicians that Lyme patients may have negative serologies. The second was to suggest treatments for the disease. Dr. John Bartlett, Chief of the Division of Infectious Diseases at Johns Hopkins University, responded to my letter in the same issue.

After attending the 1990 National Lyme Borreliosis Scientific Symposium held by the Lyme Borreliosis Foundation in cooperation with the University of Miami School of Medicine, and now with recent knowledge of the work by Rocky Mountain Labs (Dr. Willy Burgdorfer's lab), my letter needs to be strengthened.

The symposium was a two-day conference where twenty-seven physicians and researchers in the field of Lyme borreliosis presented their ideas. Approximately 200 physicians and other researchers attended.

The sections on diagnostic testing showed an urgent need to develop new diagnostic tests. The current serological tests only demonstrate whether a patient has diagnostic antibodies to the antigen employed in that test. Antigens employed with these tests are not stable, nor are they tested against a bank of control sera, as the latter has not been developed. Different strains of *B. burgdorferi* exist and patients may not be tested against the strain that infected them. The Western Blot is not a gold standard as it too suffers from these same problems. When one researcher asked another how dark a band had to be on the Western Blot to be diagnostic and the other replied he xeroxed the results, and if a band showed up on the copy it was there, we readily realized this was not the answer.

Admitted by a number of experts was the general feeling that antibiotic use will lead to negative serologic tests. A paper included in the symposium material summarized these points and the concern that *B. burgdorferi* may be immunosuppressive contributing to seronegative patients.<sup>1</sup> Additional work by this same individual as well as another suggests a seronegativity rate of about 50 percent.<sup>2,3</sup>

The urine antigen tests have been criticized for their false positive results, but were defended with the following study. Two groups of patients not thought to have Lyme borreliosis were tested by the Dianon and 3M urine antigen tests. With the Dianon test, three of sixty negative controls tested positive. On review of these three patients, two had symptoms suspicious of Lyme borreliosis and one of these two had a positive serologic test. With the 3M test, two of fifty negative controls tested positive. The concern with the urine test is that known Lyme patients can have negative

urine tests. Advocates of the urine tests recognize that antibiotic use will depress values into a negative range.

Rocky Mountains Labs is currently working on a urine antigen test which shows promise in identifying active *B. burgdorferi* infection despite antibiotic use, with no chance of false positives. As an antigen test, antibody production by the patient is not required. This test has been positive in patients with negative serologic and conventional urine antigen tests.<sup>4</sup>

Treatment courses vastly different from those in the *Medical Letter* cited by Dr. Bartlett, and at much higher doses than my letter, were recommended.

Intravenous penicillin was not recommended as treatment for late stages not only because culture and sensitivity results showed a number of American and European isolates were resistant to penicillin (e.g., minimum inhibitory concentration (MIC) for penicillin G averaged 17.5, where that of ceftriaxone was 0.08) but also because penicillin does not penetrate the central nervous system well. Preferred treatments in addition to ceftriaxone were cefotaxime (MIC 0.5), and intravenous ampicillin (MIC not done).

Oral treatment of choice was amoxicillin for children, and amoxicillin with probenecid for adults. The MIC for amoxicillin averaged 1.5. Doxycycline, commonly used by many, has a MIC averaging 3.3 but may be inferior to amoxicillin due to its bacteriostatic nature. Not even Steere recommends the use of doxycycline as the first choice treatment in late stage Lyme borreliosis.<sup>5</sup>

The dose of amoxicillin proposed for adults by one physician at the symposium was 1,000 mg tid in combination with 500 mg probenecid tid. The average length of treatment with this regimen was four months in uncomplicated late stage patients. His published paper is worth close consideration.<sup>6</sup>

To aid physicians in the diagnosis and treatment of Lyme borreliosis at this time, I have assembled a forty-page handbook which consists of Maryland State Health Department information, Wisconsin State Health Department material, and information from the symposium. An advertisement for this handbook appears in the classified section of this issue.

### References

1. MacDonald AB. Lyme disease, a neuro-ophthalmologic view. *J Neurophthalmol* 1987;7:185-190.
2. MacDonald AB. The Southampton hospital fetal borreliosis study. *Rheum Dis Clin North Am* 1989;15:663-677.
3. Rawlings JA, Fournier PV, Teltow GJ. Isolation of *Borrelia* spirochetes from patients in Texas. *J Clin Microbiol* 1987;25:1148-50.
4. John Drulle MD, Jackson, NJ. Personal communication July 29, 1990.
5. Steere AC. Medical progress: Lyme disease. *N England J Med* 1989;321:593.
6. Burrascano J. Late-stage Lyme disease: Treatment options and guidelines. *Internal medicine for the specialist* 1989;10:102-107.

WENDY P. FEAGA DVM  
Maryland Lyme Support Group



■ ■ ■

### Commentary: Lyme Disease

There is nearly uniform agreement in the field that better diagnostic tests for Lyme disease are needed. The usual tests for most commercial labs are the ELISA or the indirect fluorescence assay (IFA). Neither test has been standardized, the antigens used differ, and the cut point for positive results vary. Especially disconcerting is the interlaboratory and intra-laboratory variations noted with the current diagnostic kits that are commercially available.<sup>1</sup> Nevertheless, the rate of false-negatives remains low according to most authorities in the field unless the test is done too early in the disease course and in occasional cases where early therapy seems to interfere with the usual serologic response. False positive tests may also be noted including cross reactions in other spirochetal diseases, especially syphilis.

With regard to treatment, there is certainly no unanimously accepted regimen. The previously cited guideline from the *Medical Letter*<sup>2</sup> represents a consensus statement of authorities in the field based on available data including controlled clinical trials. I am not aware of published data or clinical trials that would refute these recommendations. These also represent the therapeutic recommendations in the review of the

topic in the *State of Maryland, Communicable Diseases Bulletin* for April 1990. The antibiotic recommendations noted by Dr. Feaga include regimens that, to my knowledge, do not have verified merit based on systematic study, nor have they been published in peer-reviewed journals.

On the basis of the observations noted above, my recommendations to physicians in Maryland would be judicious use of serology for detection of *B. burgdorferi* with the understanding that it should be used only to confirm a diagnosis based on epidemiologic and clinical observations, that the test may be falsely negative when the serum is obtained too early in the disease (as with any serologic test), and there are likely to be an unacceptably large number of false-positive tests when testing patients with a low probability of this infection. The decision to treat should be made on the basis of clinical observations and the predictive value of the diagnostic test. With a negative test, I recommend treatment only if the clinical evidence is strong and there was antibiotic treatment during the stage of erythema chronicum migrans. Many patients have vague neuro-logic or rheumatologic complaints with a negative test and, in my view, should not be treated. When the decision is to treat, the regimens used should be those recommended by acknowledged authorities in the field as previously described.<sup>2</sup> Alternative regimens should supplant these recommendations when properly controlled therapeutic trials demonstrate superiority.

### References

1. Lane RS et al. *J Clin Microbiol* 1990; 28:1774.
2. Treatment of Lyme disease. *Med Lett Drug Ther* 1989; 31:57.

JOHN G. BARTLETT MD, Chief  
Division of Infectious Disease  
The Johns Hopkins University School of Medicine

### !!!! ALERT !!!!

New state regulations governing the handling, storage and proper disposal of infectious medical waste has had a direct impact on all health care facilities throughout your state.

#### WASTE SYSTEM ANALYSIS

#### MANIFEST TRACKING SYSTEM

#### STAFF TRAINING AND SUPPORT

#### PROFESSIONAL WASTE REMOVAL

#### ONGOING SUPPORT AND BACKUP

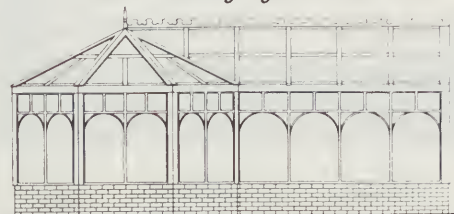
AMERICAN WASTE MANAGEMENT, INC.  
HAS YOUR SOLUTION FOR MEDICAL WASTE!



2300 Essex Street • Baltimore, MD 21224  
(301) 276-7400

### Timeless Elegance...

...a conservatory by Sun Room Company, Inc.



Sunrooms  
Conservatories,  
Windowbox  
Greenhouses  
Pool Enclosures  
Skylights



Toll Free: 1-800-882-4657  
Local: 301-882-4656  
Baltimore, Maryland

# HOW ABOUT IT?



Is it fair that only some Maryland physicians support the political activity  
that benefits all physicians?

**JOIN THE CAUSE!    GET INVOLVED!    GET POLITICAL!**

Join Maryland Medical Political Action Committee

Send your \$100 check to:  
Harold Bob, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201

Contributions to AMPAC and State PAC are not deductible as charitable contributions for Federal income tax purposes.





*Henry P. Laughlin MD, ScD, ScSD of Frederick County, Associate Editor of the *Maryland Medical Journal* and the *Physician's Practice Digest*, a member of the Med Chi Council, and former Faculty Vice President has received a Citation for Public Service from Governor William Donald Schaefer:*

... on behalf . . . of the citizens of this state, in recognition of your outstanding service to the Maryland Sheriff's Youth Ranch [and] in honor of your many years of distinguished leadership as an officer, valued member and president of the Board; and as an expression of our admiration, gratitude, and great respect for your continued good work.

Admiral Laughlin recently completed his term as President of the Maryland Sheriff's Youth Ranch Board of Directors. He has been an honorary or special Deputy Sheriff in Anne Arundel, Frederick, Carroll, Montgomery, and Washington Counties in Maryland, as well as in Fremont County, Wyoming since 1977. Dr. Laughlin holds membership in several law enforcement organizations, an Honor Delegate Award of the Annual Police Conference, the Commemorative Legion of Honor Medal of the American Police Hall of Fame, and five awards for marksmanship.

In 1985, Dr. Laughlin was the recipient of the prestigious law enforcement medal and certificate from the Maryland Society, Sons of the American Revolution (SAR), and now serves as the national SAR Surgeon General. He is currently captain of the U.S. Navy Admirals Team, selected internationally as one of eight such celebrity groups to compete in the 51st annual One-shot Antelope Hunt in Lander, Wyoming this coming September. An event widely regarded as the World Series of hunting, Dr. Laughlin has participated in the associated social and sporting activities for sixteen years.



#### *Maryland Advertisers*

☛ To advertise in *MMJ* call:  
**Network Publications**  
**301-235-0500**

*Frank A. Giargiana, Jr. MD* was recently named one of 131 new fellows of the American College of Radiology for "his outstanding contributions to the field of radiology." Criteria for selection include significant scientific or clinical research in the field of radiology, performance of outstanding service as a teacher of radiology, service to organized medicine, and an outstanding reputation among colleagues and the local community as a result of long-term superior service.

Dr. Giargiana is Director of the Department of Imaging at Harbor Hospital Center, an Assistant Professor in Radiology at Johns Hopkins Hospital, the Senior Attending - Radiology at Liberty Medical Center, and the Senior Attending - Imaging Department at Harbor Hospital Center. A Diplomate of the National Board of Medical Examiners, the American Board of Radiology - Diagnostic Radiology, and the American Board of Nuclear Medicine, he is a widely published author. A graduate of Columbia College of Physicians and Surgeons, he is an active member of the Baltimore City Medical Society. ■

Physicians' Quality Assurance Board Actions  
appear regularly in *MMJ*.



## **PROFESSIONAL COMPOUNDING CENTER OF BALTIMORE** (Kaye's AID Pharmacy)

DAVID B. LIEBMAN, R.Ph.  
Compounding Pharmacist

6913 Belair Road  
Baltimore, MD 21206

**We Make Medicines  
for Your Patients' Special Needs**

**We ship anywhere  
by UPS FAST SERVICE**

**ABSOLUTELY** no cost to the Physician

**DOCTOR, WHAT CAN WE MAKE FOR YOU?**

**Call or Fax us today!**  
**(301) 665-5192 • Fax 301-668-8533**  
**Toll free 1-800-673-8277**

MISCELLANEOUS MEETINGS

- February 2-3      **AIDS: Perspectives for Health Care Providers**, sponsored by the Department of Medicine, Harbor Hospital Center, Baltimore, MD. 14 Cat 1 AMA/PRA credits. Info: Michelle Levin, 301-347-3839.
- March 16      **Technology Update for the Family Physician**, sponsored by the Maryland Academy of Family Physicians, at the Loews Annapolis Hotel, Annapolis, MD. 5 Cat 1 AMA/PRA credits, 5 AAFP prescribed hours. Fee: \$50 MAFP members; \$75 non-members; no charge for residents and medical students. Info: William P. Jones MD 301-747-1980.
- April 10-14      **First World Congress on Stress, Trauma, and Coping in the Emergency Services Professions**, sponsored by The American Critical Incident Stress Foundation, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Jeffrey T. Mitchell PhD, 301-750-0856.
- April 29-30      **Ethical Issues in Research**, sponsored by Fidia Research Foundation at Georgetown University, Washington, DC. Fee: \$100; \$50 students. Info: 202-337-7185.
- May 8-11      **193rd Annual Meeting of the Medical and Chirurgical Faculty of Maryland - "American Medicine Today: Perspectives from Maryland,"** at the University of Maryland, University College, Center of Adult Education, College Park, MD. 15 Cat 1 AMA/PRA credits. Fee: no charge for Med Chi members; \$225 for nonmember physicians. Info: Michael Moran, Convention Director, 1-800-492-1056 in Maryland, or 301-539-0872.
- May 15-17      **Clinical Auscultation of the Heart**, sponsored by the American College of Cardiology at the Georgetown University Medical Center, Washington, DC. Info: 301-897-5400
- May 15-19      **43rd Annual Meeting and Scientific Session of the Maryland Academy of Family Physicians**, at the Sheraton Ocean City Resort and Conference Center, Ocean City. 30.75 Cat 1 AMA/PRA credits; 30.75 AAFP prescribed hours. Fee: \$195 members; \$225 nonmembers; \$110 paramedicals. Info: Brad J. Cooper MD, 301-747-1980.
- May 17-18      **Annual Meeting of the Virginia Society of Otolaryngology - Head and Neck Surgery** at Omni Waterside Hotel, Norfolk, VA. Info: Donna Scott, 804-353-2721.

Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.

- February 14      Update on Hyperbaric Oxygen Therapy  
February 18      Oral Contraceptives: Benefits and Risks  
February 21      Update on Pancreatic Disorders  
March 7      Laparoscopic General Surgery  
March 14      Advances in Treatment of Prostatic Disease  
March 28      New Approaches to Infertility Evaluation and Treatment  
April 25      Psychoneuroimmunology: The New Physiology

American College of Emergency Physicians, 1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.

- February 7, April 4      Executive Committee Meeting  
March 14, May 2      Board of Directors  
April 13      Oral Board Preparation Courses and Private Tutorials  
May 10      Annual Meeting, in conjunction with Med Chi's Annual Meeting

Maryland Society of Eye Physicians and Surgeons, 1211 Cathedral Street, Baltimore, MD. Info: 301-244-7320.

- March 1      Cornea Eye Day Program at the University of Maryland at Baltimore.  
April 18      Executive Committee Meeting



# THE JOHNS HOPKINS MEDICAL INSTITUTIONS

All courses at the Turner Auditorium unless otherwise indicated. For information on sponsored Continued Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

## February-April

**32nd Postgraduate Institute for Pathologists in Clinical Cytopathology** for Board Certified (or qualified) pathologists as a subspecialty residency. 152 Cat 1 AMA/PRA credits in two courses, both of which must be taken. Application and preregistration are advised ASAP; preregistration must be completed before March 15 unless by special arrangement. Info: J. Frost MD or B. Remley, 111 Pathology Building, The Johns Hopkins Hospital, Baltimore, MD 21205 USA (301-955-8594). *The entire course is given in English.*

**February-April Home Study Course A**, personal reading and microscopic study at own lab in preparation for Course B. Course A materials will be sent to each participant within the U.S. and Canada for home study. Participants *outside* the U.S. and Canada must make arrangements to study Course A before Course B.

**April 14-April 25 In-residence Course B**, lecture series, laboratory, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore.

## February 8

**Contemporary Issues in Macular Disease.** 7.5 Cat 1 AMA/PRA credits. Fee: \$195 physicians; \$100 those in training. Info: 310-955-2959.

## March 4-5

**Man-made Mineral Fibers: Status of Health Risk Assessment.** Info: Dr. Jacqueline Corn, 301-955-2609.

## March 14-16

**Brain Chemistry and Behavior: Advances in PET and SPECT Imaging.** 18 Cat 1 AMA/PRA credits. Fee: \$440 physicians; \$340 residents. Info: Patty Campbell 301-955-3839 or Julia Buchanan 301-955-8582.

## March 18-20

**Spectrum of Developmental Disabilities: Cerebral Palsy - Clinical and Research Issues.** 20 Cat 1 AMA/PRA credits. Fee: \$425. Info: 301-955-2959.

## March 21-22

**Clinical Care of the Patient with HIV Infection.** 14 Cat 1 AMA/PRA credits. Fee: \$300 physicians; \$150 residents. Info: 301-955-2959.

## March 21-23

**Fifth National Conference on Student Mental Health: Just Say Yes to the Mental Health Challenges of the 1990s**, at the Homewood Campus. Credits to be determined. Fee: \$225; \$125 professional-in-training; \$200 (3 or more attending from same institution). Info: 301-955-2959.

## March 22-23

**Phototherapy and Photochemotherapy: An Update for the '90s** at the Harbor Court Hotel, Baltimore. 11 Cat 1 AMA/PRA credits; 10 AAD Cat 1 credits. Fee: \$250 physicians; \$200 nurses and technicians; \$150 residents and fellows.

## April 8-13

**18th Annual Pediatric Trends.** 45 Cat 1 AMA/PRA credits, 45 PREP. Fee: \$575 physicians; \$425 residents and fellows. Info: 301-955-2959.

## April 10-12

**Topics in Ambulatory Medicine V** at the Harbor Court Hotel, Baltimore, MD. 16 Cat 1 AMA/PRA credits. Fee: to be announced. Info: 301-955-2959

## April 15-17

**Toxicology Update '91: Concepts and Advances in Immunotoxicology.** Info: Catherine Walsh, 301-955-2609.

## April 19

**Thyroid Update 1991.** 7.5 Cat 1 AMA/PRA credits. Fee: \$150. Info: 301-955-2959.

## April 25-27

**Advances in Hip and Knee Arthroplasty** at the Fort Magruder Inn Conference Center, Williamsburg, VA. 18 Cat 1 AMA/PRA credits. Fee: \$575 physicians; \$350 residents and fellows. Info: 301-955-2959.

## May 16-17

**Pediatric Allergy and Immunology for the Practitioner.** AMA/PRA credits pending. Fee: \$195. Info: 301-955-2959.

THE JOHNS HOPKINS  
MEDICAL  
INSTITUTIONS  
Continuously  
Throughout the Year

**Visiting Preceptorship in Pediatric Critical Care Medicine.** Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. Info: 301-955-2959.

**Ophthalmic Electrophysiology Technician Training Course.** Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. Info: C. Kearney 301-955-2959.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics/year in 5 bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.

Luxury Homesites

ABOUT VILLAGER

The Villager name stands for quality built homes and personalized service: use our architects or yours, build on your lot or ours. We can arrange financing, locate a lot for you, and can even sell your old house! So, compare what Villager offers. 8 1/2% fixed rate 25 year construction/permanent financing avail.

PIKESVILLE

HELMSLEY COURT LOT 18 - Level treed lot, your architect or ours. One of the last available lots in this prestigious neighborhood. Public water, sewer & gas. Ft. Garrison Elementary.

CAVES VALLEY

HUNTINGTON - Large wooded lot on private drive overlooking new golf course. Excellent investment/superior well yield. Purchase lot or custom build with us.

HILLSTEAD

KNOLLCREST FARMS LOT 7 - Fully wooded, beautiful 3 acre lot with 6.25 GPM well. Located at Falls Road and the Beltway for close-in easy access. Build in a neighborhood of million dollar homes. EURO/CLASSIC I From \$790K • Others from \$600K.



The EURO/CLASSIC I

NEW Lots now also available at Huntspring in Ruxton and Worthington Park in Owings Mills.



Brokers Protected



McDonogh Crossroads • 20 Crossroads Drive, Suite 113  
Owings Mills, MD • Day 363-0963 • Eve 363-1564

KELLY T. DRAKE, M.D.  
ALBERT L. BLUMBERG, M.D.  
ROBERT K. BROOKLAND, M.D.

*proudly announce the addition of*  
**EVA S. ZINREICH, M.D.**

*to their practice of*  
**RADIATION ONCOLOGY**

*at the*  
**GREATER BALTIMORE  
MEDICAL CENTER**

**DRAKE, BLUMBERG &  
BROOKLAND, M.D., P.A.**  
6701 North Charles Street  
Baltimore, Maryland 21204  
(301) 828-2540



## UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

**February 3, April 3 &  
June 5**

**Subspecialty Care in General Practice**, at the University Club, Baltimore. 1 Cat 1 AMA/PRA credit per date. Fee: \$50 (includes dinner). Info: 301-328-6666.

**February 21**

**Dean's Conference Number 4: Medical Advances for the 21st Century**, at the UMAB Campus, Medical School Teaching Facility. 6 Cat 1 AMA/PRA credits. Fee: \$35.

**March 13-15**

**6th National Traumatic Brain Injury Symposium**, sponsored by the Maryland Institute for Emergency Medical Services Systems, at the UMAB campus. Fee: \$199. Info: Roberta Schwartz 301-328-6101/2478.

**March 21**

**Dean's Conference Number 5: Health Issues for Men and Women**, at the UMAB Campus, Medical School Teaching Facility. 6 Cat 1 AMA/PRA credits. Fee: \$35.

**March 21-23**

**13th Annual Trauma Symposium**, at the Convention Center, Baltimore. Credits to be determined. Fee: \$395 before February 22; then, \$425. Info: Kimberly Unitas 301-328-2399.

**April 22-23**

**Infectious Diseases in Everyday Medicine**, at the Baltimore Convention Center, Baltimore, MD. 12 Cat 1 AMA/PRA credits; 12 AAFP prescribed hours; 12 ACEP credit hours. Fee: \$125.

**April 25**

**Dean's Conference Number 6: Clinical Medicine for the Community Physician; Topics in OB/GYN and Pediatrics**, at Washington County Hospital, Hagerstown, MD. 3 Cat 1 AMA/PRA credits; 3 AAFP prescribed hours. Fee: \$35.

**May 2-5**

**4th Annual Trauma Anesthesia and Critical Care Symposium**, sponsored by the International Trauma Anesthesia and Critical Care Society and the MIEMSS, at the Hyatt Regency in Baltimore. 25 Cat 1 AMA/PRA credits. Fee: \$495 physicians, \$295 residents and other health professionals before March 1; after March 1, \$550 physicians, \$350 residents and other health professionals. Info: 301-328-2399.

**Continuously  
Throughout the Year**

**University of Maryland Dean's Conferences** - Held monthly, October through April. Designed for the family/general practitioner and internist. Each conference highlights different clinical departments placing emphasis on the practical methods being used and researched at the University of Maryland. Extension programs are being planned to complement the programs held on the University's Baltimore campus.

**Visiting Professor Program** - A new 1990-1991 directory of speakers and their topics is available for area hospitals and other health care organizations. No administrative fees are charged for this service. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunities for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Hour-for-hour Cat 1 AMA/PRA credits available. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.

### PEDIATRICIAN

Maryland/suburban Washington DC - busy large pediatric group seeks additional BC/BE pediatrician to work in academic atmosphere. Competitive salary and benefits. Near 5 medical schools. Reply: MMJ, Box 1, 1211 Cathedral St., Baltimore, MD 21201.

### INTERNAL MEDICINE

BC/BE internist to join a small, well-established group practice in the Baltimore area. Competitive salary/benefits with advancement to partnership. Send confidential resume to P.O. Box 529, Brooklandville, MD 21022.

### PEDIATRICIAN WANTED

BC/BE pediatrician wanted to join busy practice in historic college town on Maryland's Eastern Shore. Salary leading to partnership. Reply: John Morgan MD, P.O. Box 477, Chestertown, MD 21620 (301-778-1420).

### FAMILY PRACTITIONER

Primary Care Specialists, Inc., a private medical group in Ellicott City, is looking for a BC/BE family practitioner to join our practice starting July 1. Our practice consists of 4 FPs and 5 internists practicing primary care medicine in a growing suburban community west of Baltimore. We offer a competitive salary & benefits package. Call is on a rotating basis, shared amongst the FPs, and excludes hospital rounds. We emphasize comprehensive care in a primary care setting, with hospitalization at Howard County General Hospital. Patients are both fee-for-service and members of capitated plans. Info: B.H. Minchew MD, Dorsey Hall Medical Center, Suite 200, 9501 Annapolis Rd., Ellicott City, MD 21043 or call collect 301-997-7000.

### PHYSICIANS WANTED

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

### FAMILY PRACTICE

Two female family practice physicians desire a third to join them in an active and growing Pasadena, MD practice. Must be Board Certified. Call Carla Varum at 255-2700.

### WESTERN MARYLAND

BC/BE internist to join BC-inter-nist in busy, unique rural practice. 72-bed hospital with ICU. 4-season recreational area. Send CV: P.O. Box 486, Oakland, MD 21550.

### ORTHOPAEDIC SURGEON

BC/BE to join 6 other orthopaedists in a large multispecialty group. Interest and expertise in spine surgery is a plus. Extensive support system and modern facility located in Columbia, MD near the cultural advantages and medical schools of the Baltimore & DC areas. Please direct inquiries and CV to: Patuxent Medical Group, Inc., 2 Knoll North Dr., Suite 401, Columbia, MD 21045, Attn: Physician Recruiter.

## BECO ASSOCIATES

### Medical Suites Available

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550

## For Sale — OB/GYN Practice

- ◆ Practice Located in Beautiful and Fast Growing Southern Maryland.
- ◆ Busy Practitioner anxious to retire and will work with qualified candidate.
- ◆ \$800,000 Gross Income, Net in excess of \$500,000.

Call Charles Attiliis, C.P.A. ◆ (703) 750-1753

## SAINT JOSEPH HOSPITAL

### HOSPITAL PEDIATRICIANS

Positions available for full-time and part-time hospital based pediatricians. Salary and benefits are competitive.

Contact: William F. DeVoe, M.D.  
Head, Department of Pediatrics  
Saint Joseph Hospital  
7620 York Road  
Baltimore, MD 21204  
337-1113



### PRACTICE WANTED

BC Family Practitioner looking to purchase General/Family Practice in Towson area. Box 5, MMJ, 1211 Cathedral St., Baltimore, MD 21201.

### INTERNAL MEDICINE PRACTICE FOR SALE

Excellent Pikesville location. Established MD is retiring. Spacious 1,050 sq. ft. incl. all furnishings & equipment; 3 large exam rooms, consult & x-ray/lab rooms. No HMO patients. Contact Ann Barcome, Kohler HealthCare Consultants, Inc. 301-441-3740.

### MCDONOUGH CROSSROADS OFFICE PARK

1359 square ft. nearly new deluxe 1st floor condo office space available in most sought after location. 2 public entrances - Lease all or 600 sq. ft. with own entrance and share secretary, etc. Great for medical/medical support uses. Call Owner: 363-0963.

### OFFICE SPACE

Available for sublet in the Pikesville area. Morning and afternoon hours available. Please contact 484-5238.

### MEDICAL OFFICE

Suitable for 1 or 2 physicians: St. Mary's County, a rapidly growing, semirural area. Contact Leon Berube for details: 997 Old Route Five, Mechanicsville, MD 20659 (301-884-3113).

**MEDICAL OFFICE TO SHARE**  
Baltimore/Pikesville office with three examination rooms. Full- or part-time. Free parking, near metro & public transportation. 301-486-2294.

### MEDICAL-SURGEON'S OFFICE TO SHARE

Pikesville: office with private consultation room to sublease, full- or part-time; x-ray and lab available. Parking lot; near Metro stop & public transportation. 301-484-8066 except Tuesday.

### LYME HANDBOOK

Clinical manifestations, diagnosis and current & proposed treatment. 40 pgs. Send \$8 payable to *LYME HANDBOOK*, c/o MD Lyme Support Group, 13151 Triadelphia Rd., Ellicott City, MD 21043.

### MMJ Classified Advertising

*Med Chi Members:*  
\$5 per line per insertion

*Nonmembers:*  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items will be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment.

### OFFICE EQUIPMENT FOR SALE

1 wall mount otoscope, Welch; 1 EKG machine automatic, 12 lead, portable, Bricher, 4 yrs old; 1 blood pressure wall mounted (trim line); 1 centrifuge, clay adams; 1 TITMUS vision test; Medi fast software (office practice); x-ray film viewer; 2 treatment tables. Info: P.O. Box 2161, Hagerstown, MD 21740.

## Information for Authors

Manuscripts may be sent to Editor, **MMJ**, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

Include full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles.

Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in **MMJ** is protected by copyright and may not be reproduced without the written permission of both the principal author and **MMJ**.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.



# Enter the Eleventh Annual Med Chi Photo Contest

**Enter early!**

*Deadline for entries is April 19, 1991 ■  
Two categories: Black & White or Color ■  
Open to all Med Chi and Auxiliary Members*

■ *First and Second Prizes Awarded in Each Category* ■ *All Photographs will be displayed at the 1991 Annual Meeting at College Park.*

## *Med Chi Photo Contest Rules*

**Eligibility:** All members of the Faculty and members of the Auxiliary to the Medical and Chirurgical Faculty may enter. Professional photographers may not enter. Members of the Photo Contest Committee and their families are not eligible.

### *Contest Rules:*

1. Photographs may be submitted in two categories: black and white or color.
2. Limit: three entries per person.
3. Prints only, no smaller than 8 X 10 or larger than 11 X 14, will be accepted. If your favorite shot is a slide, you must have a print made to enter in the contest within these size ranges.
4. Entries must be matted or dry mounted. No framed photographs will be accepted.
5. Entries must have name, address, and telephone number attached to the back of each photograph.
6. Entries may be mailed or brought to the Faculty Office, 1211 Cathedral Street, Baltimore, Maryland 21201 by the close of the business day on April 19.
7. Photographs entered in the contest will be on display at the Annual Meeting in May of 1991.
8. Prizes will be awarded to the first and second place winners. Additional information about the prizes will be published in the Journal.
9. Winners will be announced at the Annual Meeting of the Medical and Chirurgical Faculty, May 8-11, 1991.
10. Photographs will not be mailed back. Photographs may be claimed at the exhibit area at the close of the Annual meeting at noon on May 11, or at the Faculty Building thereafter.
11. The Faculty does not guarantee against loss or damage of any kind to the photographs submitted to the contest.



# Commitment and Service Since 1975

The *Med Chi Agency* was established by the Medical and Chirurgical Faculty in 1975 and now has over 5,000 physicians and employees as clients.


As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial products. You will benefit from the many coverages available for both your professional and personal needs. You will also benefit indirectly, because Med Chi owns the *Med Chi Agency* and the earnings from its operations.

For complete information about any insurance product or service, just give us a call. We can provide the answers you seek and the solutions you need.




## **THE MED CHI AGENCY**

1204 Maryland Avenue  
Baltimore, MD 21201  
301-539-6642 Toll Free-1-800-543-1262  
FAX-1-301-752-5421



193rd Annual Meeting  
Medical & Chirurgical Faculty  
of Maryland

***American Medicine Today:  
Perspectives from  
Maryland***



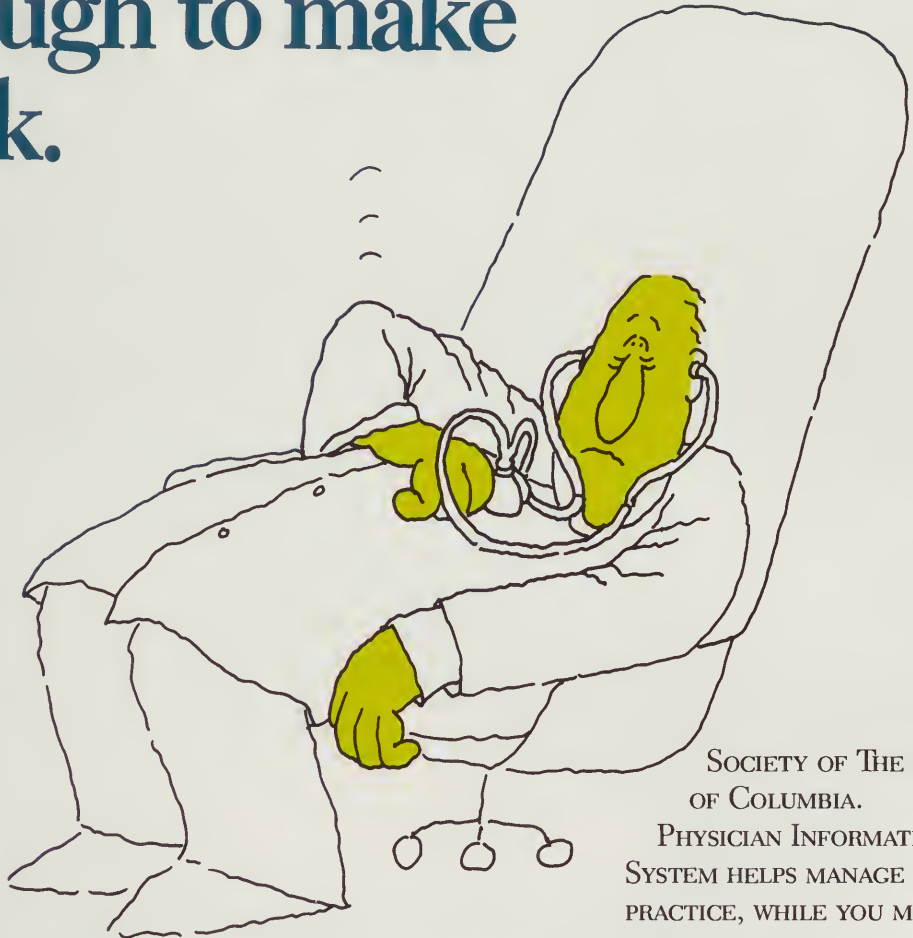
Wednesday, May 8 - Saturday, May 11, 1991  
at University of Maryland  
University College  
Center of Adult Education  
College Park.

*mark your calendar!*

For more information, call  
301-539-0872 or toll free  
1-800-492-1056.



# Competition, HMOs, Insurance and slow-paying patients... it's enough to make you sick.



THE PROBLEMS  
OF MANAGING A  
PRACTICE TODAY  
CAN REALLY MAKE  
YOU SICK.

EVEN WORSE,  
THEY CAN MAKE THE  
BUSINESS END OF YOUR PRACTICE  
SICK, TOO. THAT'S WHERE WE  
CAN HELP.

WE'RE CBSI, THE LEADER IN  
MEDICAL OFFICE AUTOMATION  
SYSTEMS SINCE 1977. OUR PHYSI-  
CIAN INFORMATION SYSTEM  
SUBMITS YOUR INSURANCE  
FORMS ELECTRONICALLY, POSTS  
PAYMENTS AND ADJUSTMENTS  
AUTOMATICALLY, AND RUSHES  
YOU COMPLETE, UP-TO-THE-  
MINUTE PATIENT CLINICAL AND  
FINANCIAL DATA. CURRENTLY  
RELIED UPON BY MORE THAN

**ALPHA MICROSYSTEMS**  
RIGHT FROM THE START.

5,000 PHYSICIANS IN OVER 50  
MEDICAL SPECIALTIES AROUND  
THE AREA. MORE THAN 99% OF  
THESE SYSTEMS ARE STILL IN USE  
TODAY BECAUSE THEY'RE FLEX-  
IBLE, ADAPTABLE AND CBSI  
BACKS THEM WITH UNPARAL-  
ELED HARDWARE MAINTEN-  
ANCE, CUSTOMER SUPPORT  
AND TRAINING.

SINCE 1981, CBSI CONTINUES  
TO BE THE ONLY PROVIDER OF  
MEDICAL OFFICE AUTOMATION  
ENDORSED BY THE MEDICAL

SOCIETY OF THE DISTRICT  
OF COLUMBIA.

PHYSICIAN INFORMATION  
SYSTEM HELPS MANAGE YOUR  
PRACTICE, WHILE YOU MANAGE  
YOUR PATIENTS.

CALL 770-2292 RIGHT NOW TO  
FIND OUT MORE ABOUT PHYSICIAN  
INFORMATION SYSTEM. IN  
MARYLAND, CALL TOLL-FREE AT  
1-800-638-6364.

# CBSI

COMPUTER BUSINESS SYSTEMS, INC.

**YOUR PRACTICE IS OUR BUSINESS.**

6211 Executive Boulevard,  
Rockville, Maryland 20852  
(301) 770-2292  
1-800-638-6364 in Maryland

An Affiliate Member of MedServ



NLM 00763853 1

# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM<sup>TM</sup> from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*



# WMJ

Maryland Medical Journal

W1 MA76M

NO. 3

1991

-----SEQ: SP0054434

MARYLAND MEDICAL JOURNAL

3  
NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA, MD 20894



University of Maryland  
School of Medicine:  
184 Years of History

Endorsed by Med-Chi  
for Maryland Physicians

© 1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.

# 4,831 Of You Have Attended Our Risk Management Seminars.

## There's Always Room For One More.

Informed consent, ICD-9-CM coding, medical record documentation, physician-patient communication, AIDS and medical practice, emerging medical technologies, financial planning, legal aspects of medical practice, insurance options, office staff procedures, health care politics in the 90's, to mention a few.

We offer an ongoing schedule of timely, relevant, and concise Risk Management programs for you and your office staff, each specifically designed around the extra skills you need in today's practice of medicine. Developed by our member physicians, the programs feature expert speakers, convenient locations, and CME credits. Some even include premium discounts.

Our seminar evaluations tell us that we're doing things right, and our attendance figures speak for themselves. We'll look forward to seeing you at an upcoming program.

There's always room for one more!



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM<sup>TM</sup> from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
**(In the D.C. Metro area**  
**call 1-301-929-7600.)**

S Y S T E M S

*We set the standard in medical computing.*

# MetPath



*"Your Partner in Practice"*

## Quality

- Quality assurance program directed by our full time QA manager and our technical director.
- Control samples of up to 10% of our work load.
- Outside proficiency program results, available to you by request.

## Service

- Courteous client service, 24 hours a day.
- Flexible specimen pick-up schedules.
- Customized requisitions.
- Specialized report formats.

## Convenience

- Comprehensive testing.
- 4 STAT labs.
- 27 Patient Service Centers.
- House call service in the Baltimore/Washington area.

### Regional Headquarters

1550 East Gude Drive  
Rockville, MD 20850  
(301)340-9800  
1(800)722-7393

### Baltimore

1246 East Joppa Road  
Baltimore, MD 21204  
(301)583-1500  
1(800)426-1676

Lab tours are welcome! Call Sales for an appointment.

a **CORNING** Clinical Laboratory



# MMJ

## Maryland Medical Journal

MARCH 1991

VOLUME 40 NO 3

### ARTICLES

- Medicine at Maryland: 1807-1991** ..... 171  
*John A. Kastor MD*
- Clinical Care, Education, and Research at the University of Maryland School of Medicine, 1807-1991** ..... 173  
*Theodore E. Woodward MD, Elijah Saunders MD, Herbert A. Kushner MD, Philip A. Mackowiak MD, and Frank M. Calia MD*  
In the past 184 years, the University of Maryland School of Medicine has undergone enormous changes, making significant contributions to medical education and the health and welfare of the State.
- Improving Preventive Care in General Medical Practice** ..... 181  
*Dorothy A. Snow MD, MPH*  
Specific efforts are necessary if physicians are to be in compliance with nationally recognized guidelines for screening, patient counseling, and immunizations. Interventions include the use of checklists, computer reminders, audits with feedback, patient education and reminders, and the use of nursing personnel.
- The HIV Epidemic and the Primary Care Physician** ..... 185  
*Jonathan A. Cohn MD and John W. Warren MD*  
It is expected that 80,000 new cases of AIDS will be reported in 1992. Physicians need to equip themselves with knowledge to apply toward case-finding, patient management, and prevention of further spread of the virus.
- HIV-associated Nephropathy: Report of a Case and Review of the Literature** ..... 191  
*John Josselson MD*  
A case of HIV-associated nephropathy in a thirty-three-year-old black, homosexual male is presented to illustrate the syndrome and serve as a focus for a review of the literature.
- The Human Thyrotropin-releasing Hormone Gene: An Application of Molecular Biology to Contemporary Endocrinology Research** ..... 195  
*John F. Wilber MD*  
Knowledge concerning the structure of the human gene preproTRH makes possible studies of its regulation by hormones and other factors such as cyclic adenosine monophosphate (AMP).
- Enteric Vaccines** ..... 199  
*Robert Edelman MD and Myron M. Levine MD*  
Considerable progress has been made in the past decade in developing vaccines against the most important bacterial and viral infections of the gastrointestinal tract.
- Frontiers in Gastroenterology: New Clinical and Research Opportunities** ..... 205  
*Jonathan B. Schreiber MD, Stephen J. Meltzer MD, and Sudhir K. Dutta MD*  
Gastroenterologists are now able to use fiberoptic endoscopy to stop life-threatening hemorrhages, to apply laser beams to ablate nonresectable obstructing cancers, and to relieve biliary tract obstruction.

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

### Advisory Member

Carmine M. Valente PhD

### Art Director

Virginia Carter

### Graphic Assistant

Valentia McVey

### Communications Assistant

Lori Robinson

### Executive Director

Angelo J. Troisi FACHE

Communications Director

Michelle Burke MHSA

Maryland Advertising  
Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

Copyright © 1991. MMJ Vol 40, No 3.  
The *Maryland Medical Journal*  
USPS 332080. ISSN 0025-4363 is published  
monthly by the Medical and  
Chirurgical Faculty of Maryland and  
is a membership benefit. Subscription  
rates: U.S. and U.S. possessions, one  
year: nonmembers \$35; foreign \$42.  
Single copy: members \$5; nonmembers  
\$7. Second class postage paid at Baltimore,  
MD and at additional mailing offices.  
POSTMASTER: send address changes to  
*Maryland Medical Journal*, 1211 Cathedral St.,  
Baltimore, MD 21201-5585. FAX 301-547-0915.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

## New Concepts in the Treatment of Primary Pulmonary Hypertension . . . . . 209

Lewis J. Rubin MD

Recent advances provide new options for long-term treatment of primary pulmonary hypertension, an illness which is usually fatal within three years of diagnosis.

## Hypertension in Blacks . . . . . 213

Carolyn J. Hildreth MD and Elijah Saunders MD

The prevalence of hypertension is significantly higher among black Americans than white Americans, and hypertension control among blacks remains unacceptably poor.

## The Spectrum of Treatment for Coronary Artery Disease: Medical Regression to High-risk Angioplasty . . . . . 219

Robert A. Vogel MD

During the past decade, the Division of Cardiology at the University of Maryland has played an active role in regression of coronary artery disease through cholesterol-lowering and high-risk coronary angioplasty.

## DEPARTMENTS

### Epidemiology and Disease Control Program . . . . . 159

### Executive Director's Newsletter . . . . . 167

### Auxiliary . . . . . 224

### A Clinical Moment with ... Diabetes . . . . . 225

## MISCELLANY

### Members in the News . . . . . 227

### Letter to the Editor . . . . . 227

### Doctors Note . . . . . 230

### Information for Authors . . . . . 231

### Classified Ads . . . . . 236



Cover: Davidge Hall, completed in 1812, is the oldest building in the U.S. in continuous use for medical education. It currently contains the offices of the President of the University of Maryland at Baltimore and the University of Maryland Medical Alumni Association, as well as two lecture theatres -- Chemical Hall on the first

floor, which is still in constant use, and Anatomical Hall under the dome on the second floor. Theodore E. Woodward MD (above left), Chairman of the Department of Medicine of the University of Maryland School of Medicine from 1954 to 1981, and John A. Kastor MD, Chairman since 1984, stand in Chemical Hall.

*Davidge Hall cover photo by the Department of Illustrative Services, University of Maryland; cover design by Virginia Carter.*





**SmithKline Beecham**  
*Clinical Laboratories*

# What's new in the clinical laboratory business?

SmithKline Beecham Clinical Laboratories has opened a 40,000 sq. ft. laboratory to support the Baltimore/Washington medical community in

Owings Mills, Maryland.



**SmithKline Beecham**  
*Clinical Laboratories*

11425 Cronhill Drive  
Owings Mills, MD 21117

(301) 581-2400

*Tell Me  
More About  
SmithKline  
Beecham's  
New Laboratory  
in  
Owings Mills,  
Maryland*

☐ I am interested in a FREE special introductory offer.

☐ Please provide me with more information on SBCL services and how they can meet my laboratory testing needs.

☐ I would like to talk to a SBCL representative.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ St. \_\_\_\_\_ Zip \_\_\_\_\_

Telephone Number \_\_\_\_\_

# Continuing...

For over fifteen years, the Med Chi Agency has been serving the needs of Maryland physicians...*your* needs, with unrivaled commitment and dedication. And as the Agency has grown, so has your trust...in us, in our products and in the way we do business with you.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial options. Among these are:



Professional Liability Insurance (Malpractice)



Personal insurance, including homeowners, auto, boat and recreational vehicle coverage and personal umbrella insurance



Office insurance, including medical equipment, medical records, computer equipment, account receivables, workers compensation, business auto and employee dishonesty



Financial and estate planning, specifically tailored to the medical professional



Individual and group, life, health and income protection



Qualified and non-qualified Retirement Planning

## ...A Commitment To Service



**THE MED CHI AGENCY**  
1204 Maryland Avenue  
Baltimore, Md. 21201-5583  
(301) 539-6642  
1-800-543-1262 (in Maryland)  
FAX (301) 752-5421



# A MEDICAL TEST SHOULD NOT SCARE PEOPLE HALF TO DEATH!



Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS™ MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

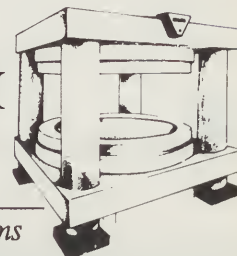
At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



**GREATER BALTIMORE  
MRI CENTER, INC.**

Not affiliated with the Greater Baltimore Medical Center.

110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*

11425 CRONHILL DRIVE OWINGS MILLS, MARYLAND 21117 (301) 581-7076

# BALTIMORE B<sup>IO</sup>MEDICAL LABORATORIES

Forty-eight hour turn around time  
for in house testing.



Cytotechnologists have at least  
eight years experience and  
are graduates of an approved  
cytotechnology school.



Continuing educational studies  
required of all technicians.



Experience with over sixty thousand  
GYN cases per year in the  
Baltimore Metropolitan area.

Specializing in Cytology and Histology





# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

Adele Wilzack, RN, MS - Secretary  
Department of Health & Mental Hygiene

J. Mehser Joseph, PhD - Director  
Community Health Surveillance & Laboratories Admin.

Ebenezer Israel, MD, MPH - Director  
Epidemiology & Disease Control Program

March, 1991

## TETANUS PROPHYLAXIS IN WOUND MANAGEMENT

A thorough attempt must be made to determine whether a patient has completed primary immunization. Patients with unknown or uncertain previous immunization histories should be considered to have had no previous tetanus toxoid doses. Persons who had military service since 1941 can be considered to have received at least one dose; although most may have completed a primary series of tetanus toxoid, this cannot be assumed for each individual. Patients who have not completed a primary series may require tetanus toxoid and passive immunization at the time of wound cleaning and debridement (Table 1).

Available evidence indicates that complete primary immunization with tetanus toxoid provides long-lasting protection--10 years or more in most recipients. Consequently, after complete primary tetanus immunization, boosters--even for wound management--need to be given only every 10 years when wounds are minor and uncontaminated. For other wounds, a booster is appropriate if the patient has not received tetanus toxoid within the preceding 5 years. Antitoxin antibodies develop rapidly in persons who have previously received at least two doses of tetanus toxoid. Tetanus-diphtheria (Td) is the preferred preparation for active tetanus immunization in wound management of patients 7 years old or older. This is to enhance diphtheria protection, since a large proportion of adults are

susceptible. Thus, by taking advantage of acute health-care visits, such as for wound management, some patients can be protected who otherwise would remain susceptible. For routine wound management of children under 7 years old who are not adequately immunized, diphtheria-tetanus-pertussis (DTP) should be used instead of single-antigen tetanus toxoid. If pertussis vaccine is contraindicated or individual circumstances are such that potential febrile reactions following DTP might confound the management of the patient, DT may be used. For inadequately immunized patients of all ages, completion of primary vaccination at the time of discharge or at follow-up visits should be ensured. (Tables 1 and 2).

If passive immunization is needed, human TIG is the product of choice. It provides longer protection than antitoxin of animal origin and causes few adverse reactions. The currently recommended prophylactic dose of TIG for wounds of average severity is 250 units IM. When tetanus toxoid and TIG are given concurrently, separate syringes and separate sites should be used. The ACIP recommends the use of only adsorbed toxoid in this situation.

*Reference: MMWR 1985;34:422.*

Table 1. Summary guide to tetanus prophylaxis in routine wound management--United States, 1985

History of adsorbed tetanus toxoid (doses)	Clean, minor wounds		All other wounds*	
	Td@	TIG	Td@	TIG
Unknown or < three	Yes	No	Yes	Yes
≥ three#	No**	No	No##	No

\*Such as, but not limited to, wounds contaminated with dirt, feces, soil, saliva, etc.; puncture wounds; avulsions; and wounds resulting from missiles, crushing, burns and frostbite.

@For children under 7 years old, DTP (DT, if pertussis vaccine is contraindicated) is preferred to tetanus toxoid alone. For persons 7 years and older, Td is preferred to tetanus toxoid alone.

#If only three doses of fluid toxoid have been received, a fourth dose of toxoid, preferably an adsorbed toxoid, should be given.

\*\*Yes, if more than 10 years since last dose.

##Yes, if more than 5 years since last dose. (More frequent boosters are not needed and can accentuate side effects.)



## MARYLAND RABIES 1990

Laboratory confirmed animal rabies increased by 81 or 20.8% over 1989 (468/389). This is the third consecutive yearly increase since a decline following the 1984 high of 1100 cases. The epizootic (animal epidemic) began in September of 1981. Several thousand persons have received postexposure prophylaxis and there have been no human deaths.

The rabies epidemic has involved all of Maryland west of the Chesapeake Bay and is now progressing down the Eastern Shore (Delmarva Peninsula). Two counties, Caroline (10) and Queen Anne's (41), experienced the first year of terrestrial rabies. Kent County (57) recorded its first 2 cases late in 1989. Five counties have totals which are an increase over the previous year. Calvert (18) had a 125% increase, Charles, 8 (14%), Garrett, 45 (543%), Harford, 41 (51%) and Prince George's, 41 for a 28% increase. St. Mary's County (4) recorded no change. The remaining jurisdictions had fewer cases in 1990. The decrease ranged from 19% (Anne Arundel County) to 66% (Baltimore City). The number of cases decreased by 5 (Carroll County) to 24 cases (Baltimore County). Terrestrial rabies has not yet involved Talbot, Dorchester, Somerset, Wicomico or Worcester counties.

The number of confirmed rabid animals does not represent the incidence of rabies in the animal population since it is only the number of positive animals found out of the total number tested. It is likely that many more (3 to 9 times more) animals die of rabies without being detected. Further, the total animal population is not known.

Tested animals are almost always restricted to animals which have been submitted because of 1) human exposure, 2) domestic animal exposure, 3) needed differential veterinary diagnosis, and, less commonly, 4) selected other Public Health requirements.

The periodic fluctuation in confirmed cases within a jurisdiction may be the result of a cyclic effect resulting from a rebound in the raccoon population following the initial invasion of rabies. A

secondary and smaller increase in number is projected to occur at 3 to 5 year intervals. Because the spread of rabies is not limited by political boundaries nor by the calendar year, the initial and secondary peaks may be spread over more than one reporting period. The primary and secondary peaks are most easily recognized in jurisdictions with larger human populations which, in turn, results in greater rabid animal detection due to human contacts and because the raccoon population is several (up to 20 or more) times greater in suburban and urban areas than in rural areas.

The raccoon as the sole maintenance reservoir accounts for four fifths of all animal rabies (382/468) and is responsible for spreading rabies at about 25 miles per year. All rabies cases appear to be the result of exposure to raccoons since there is no evidence that rabies is being transmitted within other species.

In 1990 other wild carnivores accounted for 53 or 11% of total cases (17 fox, 35 skunk, 1 otter). Domestic animals accounted for 15 or 3% of the cases (1 dog, 1 equine, 2 bovine, 11 cats). There have been 94 cats confirmed rabid since 1981 as compared to 9 dogs. An early evaluation of human rabies exposure showed that 1/2 of the rabid cats exposed no one but that the remaining half exposed an average of 9.1 persons. Unique to the raccoon rabies epidemic is that 3 groundhogs (a rodent) were found to be rabid for a total of 49 since 1981. Wild rodents rarely are found to be rabid but because raccoons and groundhogs share burrows, the risk of exposure is great.

The epidemiological cycle of bat rabies is distinct from that of terrestrial (tetrapod) rabies and only rarely do terrestrial animals contract rabies from bats. Bat strains of rabies virus can be differentiated from terrestrial rabies strains by laboratories using monoclonal antibody tests. In contrast to an average of 26.9 confirmed cases of bat rabies over the past decade, 14 bats were found to be rabid in 1990.

## MANAGEMENT OF TICK BITES AND TREATMENT OF ROCKY MOUNTAIN SPOTTED FEVER AND LYME DISEASE

*This information is an update and expansion of information originally published in the Maryland Communicable Disease Bulletin, 1980, submitted by Charles L. Wisseman, Jr., M.D., University of Maryland School of Medicine.*

Prompt removal of attached ticks every 3 to 4 hours during a total body search will prevent the transmission of Rocky Mountain spotted fever (RMSF) and Lyme disease (LD). Although many methods have been described for removing ticks, a very satisfactory method is to grasp the tick firmly by its head with a pair of forceps and exert patient, steady, gentle traction until the tick mouth parts are pulled intact from the skin. Avoid contaminating the fingers with potentially infected tick products.

Have the patient take and record oral temperature twice a day, at 8 AM and 8 PM for two weeks,

with firm instructions to notify the physician immediately at the first sign of a temperature above the baseline.

RMSF should be considered if an unexplained fever occurs within 3 to 14 days of tick exposure. An acute serum specimen is drawn and specific antibiotic therapy is begun immediately with appropriate consideration of the routine precautions (drug allergy, pregnancy, staining of children's teeth, renal and hepatic functions, bone marrow function, physiological immaturity of the newborn, etc.). Oral tetracycline hydrochloride (25 to 50 mg/kg/day given in four divided doses), doxycycline (100 mg every 12 hours), or chloramphenicol (50-75 mg/kg/day given in four divided doses) are the drugs of choice. The selected antibiotic is usually administered for 7 days, continuing until 2 days after the patient has become



afebrile. The occasional patient may experience a febrile relapse after the drug is discontinued. Retreatment with the same drug is adequate. Antibiotic resistance has not been encountered. Convalescent blood specimens for serological confirmation of diagnosis are drawn at 2 and 4 weeks after onset.

Lyme disease should be considered during 3 to 32 days following tick exposure if a patient presents with erythema migrans or EM (an expanding, annular rash, 5 cm or greater), a flu-like illness or less commonly oligoarthritis, neurologic and cardiac manifestations. An acute serum specimen should be drawn and specific treatment begun. For adults, the EM stage can usually be treated effectively with doxycycline (100 mg twice daily), tetracycline HCl (250-500 mg four times daily), or amoxicillin (250-500 mg three times daily) for 10 to 21 days. Children less than 8 years old can be treated with

amoxicillin (20-40 mg/kg/day in divided doses). Erythromycin can be used in adults and children who are allergic to penicillin or who cannot take tetracyclines. Later manifestations of the disease require longer courses of therapy and/or intravenous therapy (see Medical Letter 1989;31:57-59). Ceftriaxone may prove to be a more effective antibiotic, especially for treatment of neurologic involvement at any age. A second blood specimen drawn in 3 to 6 weeks may provide laboratory confirmation of the diagnosis. However, Lyme disease serologic tests are not sufficiently sensitive nor specific to assure laboratory confirmation of the diagnosis.

The acute and convalescent serum specimens should be sent to the State Health Department Laboratory where specific serologic tests are routinely performed for the diagnosis of RMSF and for Lyme disease.

## MAJOR TICKBORNE DISEASES

In 1990 there were 21 cases of Rocky Mountain spotted fever (RMSF) and 185 cases of Lyme disease reported in Maryland (preliminary numbers). The earliest cases of RMSF appear in April. The number of cases peaks in July-August and decreases throughout the late summer. Lyme disease cases begin to increase in April, peak in June-July and slowly decrease in the fall months, although the onset of a few cases occurs throughout the winter. Tick paralysis and tularemia resulting from a tick bite have been reported in Maryland in the past. Both human ehrlichiosis and American babesiosis are reported in nearby states and, while rare, may be occurring in Maryland. Colorado tick fever and tickborne relapsing fever occur only in the western United States.

*The following disease descriptions are published with permission and are excerpted from Chapter 4, Ticks and Tickborne Diseases Affecting Military Personnel, USAFSAM-SR-89-2, September 1989 by Jerome Goddard, Ph.D. Dr. Goddard is currently the Medical Entomologist with the Mississippi State Department of Health. (References available upon request.) Lyme Disease will be covered in a later bulletin.*

### Rocky Mountain Spotted Fever

#### General

Rocky Mountain spotted fever is one of the most severe of all infectious diseases and is characterized by headache, chills, fever and a rash which characteristically begins on the extremities, especially the soles and palms. In some cases of RMSF there may be convulsions, coma, and death. Although treatable with broad spectrum antibiotics, about 5% of cases reported in the U.S. are fatal.

#### Natural History

The causative agent of RMSF, *Rickettsia rickettsii*, is transmitted to man by several species of ticks. In the U.S., 2 of the most important vectors are the Rocky Mountain wood tick *Dermacentor andersoni*,

in the West, and the American dog tick, *D. variabilis*, in the East. When infected ticks feed, rickettsiae are transmitted to the host via salivary secretions. Transmission may also occur when persons manually detick pets since tick body fluids are infective.

In nature, the disease agent occurs in cycles among small mammals with ticks acting as transmitters; man is infected as an accidental or dead-end host only. Ticks themselves may also serve as reservoirs of the disease because *R. rickettsii* is transovarially (parent to progeny via egg) transmitted from generation to generation in ticks. However, not all ticks are infected with RMSF organisms; within a vector species (e.g., *D. variabilis*) usually only about 1-5% are infected.

#### Epidemiology

In the U.S., RMSF accounts for the majority of all reported cases of rickettsial diseases. Approximately 700 to 1,000 cases of RMSF are reported in the U.S. annually, but the disease also occurs in Canada, Mexico and Central and South America (although sometimes under different names). RMSF occurs throughout most of the U.S. with its highest incidence in North Carolina and Oklahoma. Actually the name "Rocky Mountain" spotted fever is a misnomer since more cases occur in the eastern U.S. than in the Rocky Mountain area. Although RMSF occurs year-round, most cases occur from April through September when environmental conditions are optimal for tick activity.

#### Current status

Since 1984, the U.S. annual number of reported cases of RMSF has been declining. There were 1,126 cases reported in 1983; and 848, 700 and 746 cases in 1984, 1985 and 1986 respectively. The 1987 figure was even lower at 586. How much of this decline is real and/or a lack of reporting is not clear. Factors contributing to this decline may be the use of broad spectrum antibiotics to treat a number of diseases, and education of the public to avoid tick bites and to remove ticks promptly. With the recent



emphasis on Lyme disease, interest in serological confirmation and reporting of RMSF may also have waned.

## Human Ehrlichiosis

### General

Canine ehrlichiosis is a rickettsial disease of dogs that consists of a mild or severe febrile (acute) phase which may be followed by a chronic, highly fatal phase 2 to 4 months later. Whether or not human cases of "canine ehrlichiosis" are indeed caused by *Ehrlichia canis* is unknown at this time, but cases of suspected *E. canis* infection have been characterized by many spotted fever-type manifestations such as fever, anorexia, myalgia, arthralgia, headache, and nausea, and often referred to as "spotless" spotted fever. In addition, most patients have leukopenia, thrombocytopenia, and mildly high hepatic enzyme activities.

### Natural history

The disease in dogs is caused by *Ehrlichia canis*, an obligate intracellular rickettsia that parasitizes leukocytes of wild and domestic Canidae, and the brown dog tick, *Rhipicephalus sanguineus*, is the primary vector and reservoir. Other possible reservoirs include rodents, wild canids, and chronically infected dogs. Of all tick species, the brown dog tick probably has the most widespread distribution in the world today and is commonly found infesting homes of dog owners. The ticks may transmit *E. canis* to dogs for up to 5 months after engorgement. Transstadial transmission of the agent occurs in *R. sanguineus* but transovarial transmission apparently does not.

### Epidemiology

Little is known at this time about the epidemiology of human (canine) ehrlichiosis, but the disease in dogs occurs throughout many regions of the world and is widespread in the southern half of the U.S. Recently, human cases of the malady have been increasingly diagnosed. In 1986, the first confirmed human case of canine ehrlichiosis was reported from Arkansas, with at least six additional cases subsequently being confirmed in Texas in 1986. In Oklahoma in 1987, health department personnel reviewed numerous sera samples of suspected spotted fever cases that had tested negative for RMSF and found 16 sera significantly positive for *E. canis*. These reports suggest that many suspect cases of RMSF or murine typhus may actually be ehrlichiosis. Persons at greatest risk of contracting ehrlichiosis are those who regularly come into contact with tick-infested dogs.

### Current status

If *E. canis*, or a closely related agent, is becoming adapted to the human host, the incidence of human ehrlichiosis is likely to increase in many parts of the world. Various tick species may be involved in human cases of ehrlichiosis. Although *R. sanguineus* is the vector of *E. canis* to dogs, it is usually discounted as a vector to humans because it has historically only rarely bitten humans in the U.S. Recently, evidence was found indicating that this species may be becoming anthropophilic and increased human biting by this species is likely. This biting may also lead to an increase in the incidence of human ehrlichiosis.

## American Babesiosis

### General

Human babesiosis is a malaria-like disease of varying severity, which becomes clinically apparent 1-4 weeks after exposure. The disease is characterized by fatigue, anorexia, fever, chills, headache, and generalized myalgia.

### Natural history

The infecting organism of American human babesiosis is the rodent piroplasm (protozoan), *Babesia microti*, associated with the white-footed mouse. The vector to humans is exclusively *Ixodes dammini* that appears to be abundant only where numerous deer are found. According to Hoogstraal the *I. dammini-B. microti* associated disease is an ecologically unique, localized phenomenon: a benign zoonotic infection of rodents and ticks flaring into an outbreak infecting humans where environmental changes provide numerous hosts and shelters for dense populations of ticks.

### Epidemiology

American human babesiosis occurs primarily in the Massachusetts and New York area of the U.S., but particularly on Nantucket Island. The present limited focus of American babesiosis may be related to deer abundance and increasing contact of humans outdoors with vegetation harboring rodents and ticks. Annual case numbers are difficult to ascertain but over 100 cases of human babesiosis have been reported in the U.S. since 1969. Age of the patient affects the clinical course of disease with the most seriously ill patients usually being more than 60 years old. Few clinical cases have been diagnosed in spleen-intact persons below age 50.

### Current status

The incidence of human *Babesia microti* infections appears to be stable.

## Pneumococcal Vaccine:

**Remember to give pneumococcal vaccine to persons 65 years old and over and to those at increased risk of pneumococcal disease !**



### **TAX-DEFERRED ANNUITIES\***

- *Competitive rates of interest*
- *Tax-deferred interest until withdrawn*
- *Safety of investments*
- *Access to income*
- *Rate guarantees for 1-3-5 years*

**CALL TODAY!**

### **You Need More Security Than Social Security...**



INVESTMENTS OFFERED AT  
**REISTERSTOWN FEDERAL  
SAVINGS BANK**  
Through Time Financial Services, Inc.  
CALL KATHY WALDER or  
LAURA WORM  
at 833-2693, EXT. 221 or 220

### **LONG-TERM HEALTH CARE\***

- *Flexible coverage*
- *Guaranteed renewable*
- *Inflation protection available*
- *Lifetime benefit options*
- *Protection for Alzheimer's disease*

**CALL TODAY!**

\* Contracts are protected by the legal reserves of the issuing insurance company and are not FDIC insured.



## **PHYSICAL THERAPY**

Specializing in treatment for pain of the neck and back.

- Prompt scheduling for your patients
- Narrative reports sent to each referring physician
- State-of-the-art facility, featuring isokinetic evaluation and exercise equipment
- Therapy provided as prescribed

We welcome the opportunity to serve your patients

### **PYRAMID HEALTH SERVICES, INC.**

Robert J. Varley, P.T.

1001 North Point Boulevard • Baltimore, MD • 301-282-9259



## Which Box Would You Rather Deposit Your Insurance Reimbursements In?

If you process your claims through the mail, it takes an average of two months before your reimbursements make it to the bank.

And that can really put you in a box in terms of cash flow.

But not if you join the more than 1800 physicians who are now using HCS electronic claims systems. On the average, they receive payments in days, instead of months. Reason enough to consider using our custom designed systems.

What's more, our systems are labor savers. Stacks of claims that used to take weeks to process by mail can be sent through our claims

network in a matter of hours. Saving you enormously in administrative time. Not to mention postage.

And since HCS has the backing of a billion dollar health care organization, you can depend on us for long term support, service, and solutions as your office needs change.

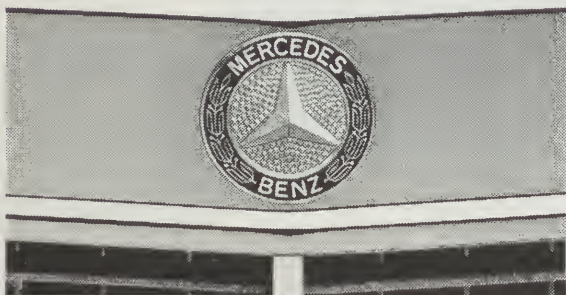
Call Toll-Free 1-800-543-6711 for more information. Because in rain, snow, sleet or hail, we can deliver insurance reimbursements faster.



**Health Communication Services, Inc.**

*You'll Be Overwhelmed By Your  
Cash Flow, Not Your Overhead.*





## Let Us Earn Your Business!

*R & H Motor Company Offers You:*

Valet pick-up and delivery service  
Knowledgeable service people who care  
Over 60 years of Mercedes sales experience  
Oldest Mercedes Benz dealer in Baltimore area

**R&H**   
**MOTOR CARS LTD.**  
363-3900

9727 Reisterstown Road  
Owings Mills, Maryland  
2 miles North of Beltway Exit 20

## Professional Employment, Inc.

SPECIALIZING IN RECRUITMENT FOR THE MEDICAL PROFESSION

*Beverly F. Epstein, MPA*

**When you need Experienced, Qualified, Permanent:**

- Medical Secretaries
- Medical Transcribers
- Receptionists
- Medical Assistants
- Billing/Insurance Secretaries
- Office Managers

**PROFESSIONAL EMPLOYMENT, INC.**  
**(301) 560-2646**

**FEE:** Permanent Placement - a one time fee of \$625.00 per placement.

**TERMS:** Permanent Personnel are placed with a one month 'grace' period which is in effect from starting date. If employment is not mutually satisfactory during this time period, additional qualified applicants will be submitted and/or a full credit will be applied only after receipt of payment.

## Luxury Homesites

### ABOUT VILLAGER

The Villager name stands for quality built homes and personalized service: use our architects or yours, build on your lot or ours. We can arrange financing, locate a lot for you, and can even sell your old house! So, compare what Villager offers. 8 1/2% fixed rate 25 year construction/permanent financing avail.

### PIKESVILLE

**HELMSLEY COURT LOT 18** - Level treed lot, your architect or ours. One of the last available lots in this prestigious neighborhood. Public water, sewer & gas. Ft. Garrison Elementary.

### CAVES VALLEY

**HUNTINGTON** - Large wooded lot on private drive overlooking new golf course. Excellent investment/superior well yield. Purchase lot or custom build with us.

### HILLSTEAD

**KNOLLCREST FARMS LOT 7** - Fully wooded, beautiful 3 acre lot with 6.25 GPM well. Located at Falls Road and the Beltway for close-in easy access. Build in a neighborhood of million dollar homes. EURO/CLASSIC I From \$790K • Others from \$500K.



The EURO/CLASSIC I

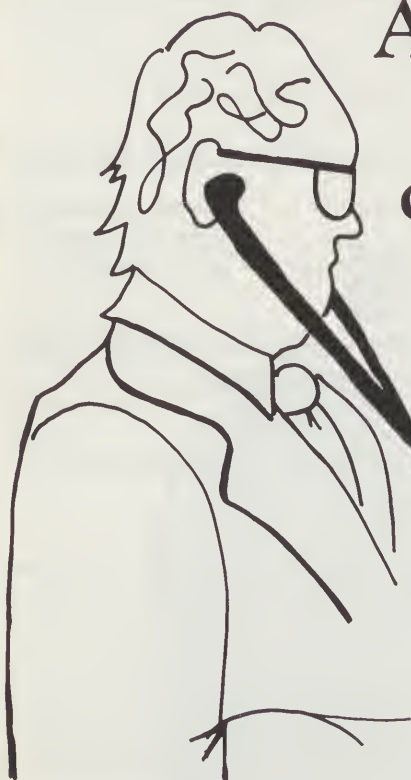


**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

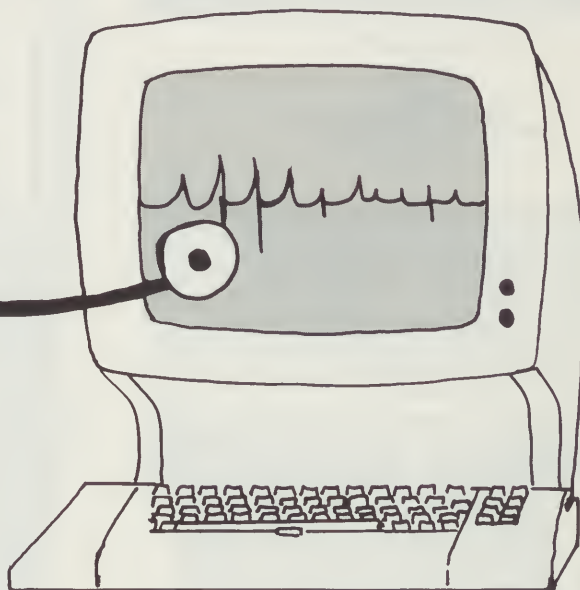
Brokers  
Protected



McDonogh Crossroads ■ 20 Crossroads Drive, Suite 113  
Owings Mills, MD ■ Day 363-0963 ■ Eve 486-5405



Are you desperately in need  
of a **DEPENDABLE**  
office management system?



## Turn to The Medical Manager® — more than 10,000 in use, nationwide.

Many medical practices have had the unfortunate experience of going with an office computer system that had no "follow up." When you took two aspirin and called them in the morning, they weren't there.

That's why more and more doctors are switching to the No. 1 selling software for medical practice management in the country—The Medical Manager.® As the nation's second largest dealer, we have more Medical Management systems in operation in the mid-Atlantic states than any other dealer.

It's possible that our new system, customized for your particular practice, will cost *less* than updates you need for your old system. In some cases you can

use the hardware you have, since The Medical Manager® runs on most micro computers.

After we install The Medical Manager® system, we train your staff, and continue to provide on-going support *every time* you call!

Please tell us about your system and your needs. We'll give you a **FREE ESTIMATE** on converting your system. Yes, we make office calls!

**CALL TOLL FREE**  
**1-(800) 776-2454**

or contact your nearest PRISM office

**P<sup>△</sup> R<sup>△</sup> I<sup>△</sup> S<sup>△</sup> M<sup>△</sup>**  
MEDICAL SYSTEMS

Fairfax  
(703) 359-0777

Winchester  
(703) 662-4545

Richmond  
(804) 330-9225

Baltimore  
(301) 494-0992



# Executive Director's Newsletter

March 1991

1991-1992  
Committee Selection  
Cards Attached

---

## Committee Selection Cards

---

---

## 1991 Annual Meeting

---

Med Chi members interested in serving on a Med Chi Committee during 1991-1992 should complete the committee selection card following this newsletter. All members should complete this card by March 31, 1991 in order to be considered for appointment to a Med Chi committee.

A registration form for Med Chi's 1991 Annual Meeting, "American Medicine Today, Perspectives from Maryland," is featured on pages 222 and 223 of this MMJ. The meeting will be held on Wednesday, May 8 thru Saturday, May 11, 1991 at the University of Maryland Center of Adult Education in College Park, Maryland. AMA President John C. Tupper MD will address the House of Delegates on May 8th. Mrs. Marilyn Quayle and Senator John D. Rockefeller, IV (D-WV) will also speak during the meeting.

Entertainment for this year's meeting includes a performance by the Capitol Steps, a political cabaret troupe from Washington, on Wednesday May 8th. There will also be a dinner honoring Med Chi President Reynaldo L. Lee-Llacer MD on Friday, May 10th. Call now to make your reservations for these events.

To pre-register for the Annual Meeting by phone or for additional information, call Michael Moran at 301-539-0872 or 1-800-492-1056.

---

## Physicians in the Persian Gulf

---

Med Chi would like to recognize the dedicated physicians serving in America's armed forces who have been called to action in "Operation Desert Storm" in Saudi Arabia. If you know of a colleague who has been called to serve, please contact Med Chi's Public Relations Department at 301-539-0872 or 1-800-492-1056.

---

## Physician Volunteers for War Effort

---

Med Chi has received many inquiries from physicians who wish to volunteer for civilian duties in a military facility or a V.A. hospital and from physicians interested in active military service. For more information contact one of the numbers listed below:

### Civilian Volunteers

American Red Cross 202-639-3589

### Armed Forces

Army Active Reservists 404-669-6495 & 404-669-6823

Army Ready Reservists/  
Mobilization Augmentees 314-538-3219 & 314-538-3220

Retirees (Reserve or Regular Army)

1-800-531-1114 ext. 6655 & 6855

Navy Reservists 1-800-424-5489

Navy Retirees 1-800-966-9174

Air Force Reservists or Retirees 912-926-5769

---

## Florida Liability Insurer Ceases Operations

---

Following a Florida state insurance department hearing, the Physicians National Risk Retention Group (PN), a subsidiary of Physicians National Reliance Group, has agreed to stop doing business in that state. After an examination of PN's financial statements, the Florida insurance examiner was concerned that PN's reserves might not be enough to pay claims. The State insurance department concluded that PN was in a "hazardous financial condition" and "created a serious danger to the safety and public

---

## *Medical Mutual Seminar Offers 5% Premium Discount*

---

welfare of the citizens in the State of Florida, including the policy holders, subscribers, claimants and creditors who are dependent upon Physicians National." PN has been offering coverage at rates 20 percent less than those charged by other programs. Some Florida doctors reported paying 50 percent less.

Medical Mutual has announced it will offer its subscribers a 5 percent discount on their 1992 Medical Mutual renewal premium for attending a seminar, "Medical Records: Charting A Course for the 90's," during 1991. The seminar is designed to provide physicians with a basis for quality assurance within the medical practice. The course covers both basic and legal principles of record-keeping and offers practical applications for risk management. Med Chi is co-sponsoring the seminar which is designated for 3 credit hours in Category 1 of the Physician's Recognition Award of the AMA. The seminar will be given through September and sessions will be held at Medical Mutual, Med Chi and a number of different locations around the State. Each seminar runs from 5:00-9:00 p.m. Registration and a light supper begin at 5:00 and the seminar starts at 5:30 p.m. The fee for the seminar is \$40.00 per person.

Since the last seminar will be held on September 30, 1991, physicians are urged to attend an early session to avoid a "crunch" at the end. For more information about the seminar, please call Natalie Harper or Roz Laakso at Medical Mutual at 301-785-0050 or 1-800-492-0193.

### "Medical Records: Charting A Course for the 90's" - Early Seminar Dates and Locations

March 4	Medical Mutual, Hunt Valley
March 11	Columbia/Freestate, Columbia
March 13	Med Chi, Baltimore
March 20	Frederick Memorial Hospital, Frederick
March 21	Medical Mutual, Hunt Valley
March 26	Calvert Memorial Hospital, Prince Frederick
March 27	Medical Mutual, Hunt Valley
March 28	Shady Grove Adventist Hospital, Rockville
April 3	Medical Mutual, Hunt Valley
April 4	Memorial Hospital, Easton
April 8	Anne Arundel Gen. Hosp., Annapolis
April 11	Medical Mutual, Hunt Valley
April 15	Medical Mutual, Hunt Valley
April 16	Columbia/Freestate, Columbia
April 22	Medical Mutual, Hunt Valley
April 24	Memorial Hospital, Cumberland
April 25	Holy Cross Hospital, Silver Spring
April 30	Gr. Balt. Medical Center, Baltimore
May 7	Medical Mutual, Hunt Valley
May 8	Columbia/Freestate, Columbia
May 13	Medical Mutual, Hunt Valley
May 16	EconoLodge, Cambridge
May 20	Peninsula General Hospital, Salisbury
May 21	Medical Mutual, Hunt Valley
May 30	Med Chi, Baltimore
June 3	Columbia/Freestate, Columbia
June 6	Medical Mutual, Hunt Valley
June 10	Medical Mutual, Hunt Valley
June 11	Doctors Community Hospital, Lanham
June 13	Frederick Memorial Hospital, Frederick



---

## *Billing for HMO Members*

---

In a recent letter to a Maryland physician, the Consumer Protection Division of the Office of the Attorney General provided a clarification regarding when a physician may bill a patient for services not covered by an HMO. Current law prohibits providers from billing HMO members for services covered by the HMO (H.G. 19-710 (o)). However, the Health Ombudsman of the Office of the Attorney General states that as soon as the provider has confirmed that the service is not covered, either because the consumer went outside the plan or for any other reason, the provider may bill the patient as a self-pay patient. For further questions regarding this issue, contact the Consumer Protection Division at 301-576-7216.

---

## *Health Access America*

---

The AMA is mounting a comprehensive campaign to reform the health care system, called Health Access America. Physicians need to be at the forefront of health care system reform, working at the state and local levels through the Federation of medical societies. To accomplish the ambitious goals of the Health Access America proposal, the AMA and Med Chi members are focusing on communication and legislation activities. Herman C. Maganzini MD, Chairman of Med Chi's Public Health Committee, is coordinating Health Access America efforts in Maryland.

For more information on how physicians can help spread the word about Health Access America, contact Betsy Newman at Med Chi at 1-800-492-1056 or 301-539-0872.

---

## *International Medical Graduates*

---

At its October meeting, the AMA Board of Trustees voted to support federal legislation designed to assist International Medical Graduates (IMGs) in obtaining initial state licensure, licensure by endorsement, medical staff positions, and clinical privileges. The bill seeks to provide measures to help to overcome what IMGs view as discriminatory practices. The bill would create a voluntary national repository of IMG records to be established by the Secretary of the Department of Health and Human Services.

---

## *March 30th is Doctor's Day*

---

President George Bush has proclaimed March 30th as "National Doctor's Day" in recognition of the invaluable contribution physicians have made to the Nation and continue to make in our daily lives. This proclamation enables citizens of the United States to publicly show appreciation for the role of physicians "in caring for the sick, advancing medical knowledge, and promoting good health."

---

## *Governor's Committee on Employment of People with Disabilities Awards*

---

Med Chi is interested in nominating a physician for the Health Care Professional of the Year Award offered by the Awards Subcommittee of the Governor's Committee on Employment of People with Disabilities. This award is presented to a health care professional who has made an outstanding contribution in advancing employment opportunities and/or who has played an important role in the rehabilitation of disabled individuals. If you would like to nominate a physician for this award, contact Med Chi's Public Relations Department at 301-539-0872 or 1-800-492-1056.

---

## *Photo Contest*

---

All Med Chi physicians and auxiliary members are invited to express their photographic talents in the 1991 Med Chi Photo Contest. First and second prizes will be awarded for black and white and color photographs and all entries will be displayed during the 1991 Annual Meeting at the University of Maryland Center for Adult Education in College Park. For more details on the contest, see the ad on page 218.

---

## *Doctor/Lawyer/ Teacher Partnership Against Drugs Update*

---

The Doctor/Lawyer/Teacher Partnership Against Drugs was honored with the American Bar Association's top Partnership Award in January. Med Chi is currently seeking physician volunteers for this program throughout the State.

In Baltimore City, 24 out of 27 schools are participating in the program. Statewide coordinator, Hiroshi Nakazawa MD, reports that doctor/lawyer teams are scheduled to speak to students throughout February, March and April. Several other counties around the State are also initiating doctor/lawyer partnerships. In Prince George's County, Kevin Hennesy MD and Valerie Siegal, Esq. spoke to a group of approximately 10 physicians and 25 attorneys during a training session in January. In Harford County, doctor/lawyer teams plan to visit more than 100 physical science classes in county middle schools between February and June. Amelito Canlas MD, a Past-President of the Harford County Medical Society, is actively recruiting physicians for the program. So far more than 10 local doctors and 60 lawyers have volunteered to participate. Laurie Dawson, a county teacher, is coordinating the program in Harford County.

In Western Maryland, Gerald Schipper MD recently reported that doctor/lawyer teams have already completed 2 school visits out of the 9 middle schools in Frederick County. He added that there are 10 physicians in Frederick county who have volunteered for the program. Med Chi coordinators on the Eastern shore include Donald Lewers MD in Talbot County and John Seymour MD in Kent County.

In Baltimore County, Gary Pushkin MD and Baltimore County Medical Society Executive Director Nielsen Andrews recently met with John S. Heck EdD, Coordinator for the Baltimore County Schools Office of Health, and began plans to initiate a pilot program in high schools in the Dundalk, Pikesville and Dulaney Valley areas. Dr. Pushkin and Debbie Sweet are the county coordinators for this effort.

To volunteer for the Doctor/Lawyer/Teacher Partnership Against Drugs, contact your local component society or Med Chi's Public Relations Department at 301-539-0872 or 1-800-492-1056.

---

## *"You're Good. Too Good for Drugs." Magnets and Posters*

---

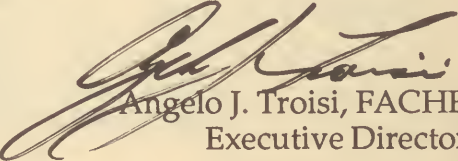
"You're Good. Too Good for Drugs." is the slogan of Med Chi's Doctor/Lawyer/Teacher Partnership Against Drugs. To promote this slogan, the Physician Rehabilitation Program has sponsored the production of "picture frame" magnets and posters to be distributed by doctor/lawyer education teams during their visits to schools. All Med Chi physicians can request these items for students and their patients. Both the magnet and poster are aimed at reminding people, especially the young, they don't need to start taking drugs and that support systems are available to help them avoid making the wrong decisions. To order your magnets and posters contact Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056.

---

## *Medicare Funds Released*

---

The Office of Management and Budget has agreed to release approximately \$75 million of the Medicare contractors contingency fund. Health and Human Services sources indicate that \$75 million should be sufficient to avoid the two-month delay in physician payments that were predicted if additional funds were not forthcoming.

  
Angelo J. Troisi, FACHE  
Executive Director



...essarily meet your needs as a Maryland physician, Med Chi must maintain an extensive framework of committees to uphold prior commitments, manage current programs, and formulate new policy. It is essential that these committees be comprised of interested members so that Med Chi will remain a strong, viable, and active organization.

Please indicate your willingness to serve by checking your committee preference and special interests on the reply card. Every effort will be made to appoint you to the committee of your choice.

We intend to appoint as many members as possible to committees to insure Med Chi's continued growth as the leading voice for medicine in Maryland.

Thank you for your support.  
J. David Nagel MD  
President-elect

I am interested in serving on the following Med Chi committees:

- |  |   |
|--|---|
| <input type="checkbox"/> AIDS Committee                                    | <input type="checkbox"/> Mental Health Committee                            |
| <input type="checkbox"/> Alcoholism and Chemical Dependency Committee      | <input type="checkbox"/> Music Medicine Clearinghouse Committee             |
| <input type="checkbox"/> Computers in Medicine Committee                   | <input type="checkbox"/> Occupational Health Committee                      |
| <input type="checkbox"/> Continuing Medical Education Review Committee     | <input type="checkbox"/> Peer Review Committee                              |
| <input type="checkbox"/> Drugs Committee                                   | <input type="checkbox"/> Physician/Patient Relations Committee              |
| <input type="checkbox"/> Emergency Medical Services Committee              | <input type="checkbox"/> Physician Rehabilitation Committee                 |
| <input type="checkbox"/> Finance Committee                                 | <input type="checkbox"/> <i>Physician's Practice Digest</i> Editorial Board |
| <input type="checkbox"/> Hospital Medical Staffs Committee                 | <input type="checkbox"/> Professional Ethics Committee                      |
| <input type="checkbox"/> Insurance Fund of Med Chi Committee               | <input type="checkbox"/> PRO Monitoring Committee                           |
| <input type="checkbox"/> Legislative Committee                             | <input type="checkbox"/> Public Health Committee                            |
| <input type="checkbox"/> Liaison Committee with Medical Assistance Program | <input type="checkbox"/> Immunization and Infectious Diseases Subcommittee  |
| <input type="checkbox"/> Library and History Committee                     | <input type="checkbox"/> Infant, Child & Adolescent Health Subcommittee     |
| <input type="checkbox"/> Long Term Care and Geriatrics Committee           | <input type="checkbox"/> Maternal Welfare Subcommittee                      |
| <input type="checkbox"/> Managed Care and Third Party Liaison Committee    | <input type="checkbox"/> Sports Medicine Subcommittee                       |
| <input type="checkbox"/> <i>Maryland Medical Journal</i> Editorial Board   | <input type="checkbox"/> Public Relations Committee                         |
| <input type="checkbox"/> Medicine and Religion Committee                   | <input type="checkbox"/> Small Area Practice Variations Committee           |
| <input type="checkbox"/> Mediocolegal Committee                            | <input type="checkbox"/> Specialist Identification Committee                |
| <input type="checkbox"/> Other Interests: _____                            | <input type="checkbox"/> Specialty Societies Committee                      |
|  | <input type="checkbox"/> Young Physicians Committee                         |

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_ County: \_\_\_\_\_

**Place  
Stamp  
Here**

Medical and Chirurgical Faculty of Maryland  
1211 Cathedral Street  
Baltimore, Maryland 21201-5585



# Central Laboratories

Established 1970

## Central Laboratories Would Like to Thank the Medical Community in Maryland for 20 Years of Service

### **MISSION:**

Central Laboratories is a leader in clinical laboratory reference testing. We have served the medical community for more than twenty years. Our mission is to continually improve our services to meet the needs of our clients and patients.

### **GUIDING PRINCIPLE:**

Central Laboratories strives for excellence in everything we do; in our services, our human relations, and our competitiveness.

Central Laboratories is pleased to announce that the same high quality services with uncompromised integrity that we provide to the hospitals in Maryland is now available to physicians offices, industry, and long-term healthcare facilities. Please phone the marketing department for information on our services. We will be pleased to provide a customized proposal for your laboratory testing needs.



1920 Greenspring Drive  
Timonium, Maryland 21093

(301) 252-6710 • 1-800-331-2558 • fax (301) 252-6750

Visit us at the Med-Chi Annual Meeting

# MALPRACTICE INSURANCE



## CHECK!

- ☐ Whether you have
- ☐ the right policy
- ☐ the right premium
- ☐ the right coverage

You may have a great policy, but it doesn't mean that it will be the best and most fitting to your present & future needs.

---

## ONAL'S INSURANCE AGENCY

*Complete Insurance Services*

---

For more information, contact  
Korky Onal

**Telephone: (301) 859-1990 • FAX: (301) 684-3212**



518 S. Camp Meade Road, Suite 4 • Linthicum, Maryland 21090



---

# Medicine at Maryland: 1807-1991

---

John A. Kastor MD

---

*Dr. Kastor is Theodore E. Woodward Professor of Medicine and Chairman of the Department of Medicine at the University of Maryland School of Medicine, and Physician-in-Chief of the University of Maryland Hospital, Baltimore. Reprints: John A. Kastor MD, University of Maryland Hospital, 22 South Greene St., Baltimore, MD 21201.*

One hundred and eighty-four years ago, teaching in what we now call Internal Medicine was first offered to medical students at the University of Maryland School of Medicine in Baltimore by a "department" consisting of one physician, Dr. Nathaniel Potter, Professor of the Theory and Practice of Medicine. In 1991, the Department of Medicine carries out its work with a faculty of 138 full-time and 223 part-time and volunteer members, 139 trainees, and an administrative, clerical, and technical staff of 347.<sup>1</sup> Clinical medicine in Dr. Potter's day was taught mostly by lectures in the amphitheater of Davidge Hall. Now, the Department of Medicine educates its students and postgraduate trainees in its research laboratories, and at the bedside and in the outpatient clinics of its primary teaching hospitals (the University of Maryland Hospital and the Baltimore Veterans Administration Medical Center), and at Mercy Medical Center, as well as Union, York and other affiliated hospitals.

As the only state medical school in Maryland, the School of Medicine has continuously fulfilled its responsibility to train physicians who will practice the profession within our State. Accordingly, over 25 percent of Maryland physicians and surgeons have received their MD degrees from the University of Maryland School of Medicine. The School and Department are also charged to give sophisticated, contemporary medical care in their teaching hospitals and to conduct research that will benefit the citizens of the State and the nation.

In this issue of the *Maryland Medical Journal*, the Department of Medicine reports on the educational, clinical, and research activities being conducted by its faculty and staff. The first article describes the work of the chairmen who preceded Dr. Theodore E. Woodward (our renowned and much respected leader for twenty-seven years) and who built the Department from its earliest days; recounts the racial integration of the medical wards in the 1960s, a subject which may seem foreign to our current students and younger graduates; and discusses the Department's educational programs, as well as the operation of our medical service at the Baltimore Department of Veterans Administration Medical Center. This historical perspective and overview of the Department sets the stage for the subsequent articles, in which members of the general medical and specialty divisions discuss the work they and their colleagues are conducting, and describe the advances being made in the management of some of the diseases internists treat.

I hope that the readers of the *Maryland Medical Journal*, both those who are and who are not graduates of the University of Maryland School of Medicine and its training programs, will enjoy this "dedicated" issue. The Department thanks the Editor and the Editorial Board for giving its faculty this opportunity to contribute to the *MMJ*.

## References

1. Kastor JA. Leading a department of medicine in the 1980s. *Md Med J* 1986;35:267271.

## Acknowledgements

I thank Molly Lutz and Lisa Lipton for their editorial assistance in producing this issue.



Announces the Opening  
of a New Location Providing  
Physical Therapy and  
Industrial Rehabilitation

### Special Services Available

Work Hardening  
Orthopaedic Physical Therapy  
Pre-Employment Screening  
Back Care Program  
Foot Care and Orthotics  
Hand Therapy  
Electrodiagnostic Testing

### INDUSTRIAL REHABILITATION AND ORTHOPAEDIC PHYSICAL THERAPY

New Location: 2108 Emmorton Park Rd.  
Emmorton Business Park  
Edgewood, MD 21040  
**671-7711**

Baltimore City:	6305 York Rd. <b>435-7565</b>	Anne Arundel County:	Glen Burnie 7845 Oakwood Rd. <b>761-7660</b>
-----------------	----------------------------------	----------------------	--

Harford County:	Havre de Grace 800 South Union Ave. <b>939-0520</b>	Severna Park	Sports Therapy and Rehabilitation 22 Truck House Rd. <b>544-5883</b>
	Fallston 2300 Bel Air Rd. <b>877-0747</b>	Annapolis	122 Defense Hwy <b>244-2626</b>

QUALITY PHYSICAL THERAPY FOR OVER 20 YEARS

# When You Need A Specialist, We've Got Quite A Number: **1-800-492-5538**

You're looking at the number for the University Physicians Consultation and Referral Service—a direct phone link to all the clinical resources of the University of Maryland Medical Center. Dial it, and a knowledgeable Physician Service Representative will provide access to:

- Any of the Medical Center's over-400 individual specialists, forming an incomparable resource for consultation and referral.
- The most current information on primary, secondary, and tertiary medical care.

Call—toll-free throughout the Mid-Atlantic region—to request complete information or to begin using the Service. In Baltimore, dial locally, at **328-2999**.



UNIVERSITY PHYSICIANS  
UNIVERSITY OF MARYLAND MEDICAL CENTER



---

# Clinical Care, Education, and Research at the University of Maryland School of Medicine, 1807-1991

---

Theodore E. Woodward MD, Elijah Saunders MD, Herbert A. Kushner MD,  
Philip A. Mackowiak MD, and Frank M. Calia MD

---

---

*In the past 184 years, the University of Maryland School of Medicine has undergone enormous changes, making significant contributions to medical education and the health and welfare of the State.*

---

*From the University of Maryland School of Medicine, where Dr. Woodward is Professor of Medicine Emeritus; Dr. Saunders is Associate Professor of Medicine, Head of the Hypertension Division and Clinical Director of the Hypertension Center; Dr. Kushner is Associate Professor of Medicine and Senior Medical Consultant in the Division of General Internal Medicine and Geriatrics; Dr. Mackowiak is Professor of Medicine and Associate Chairman of the Dept. of Medicine, as well as Director of the Medical Service at the Baltimore DVAMC; and Dr. Calia is Professor of Medicine, and Vice Chairman and Director of Education in the Dept. of Medicine. Reprints: T.A. Woodward MD, Dept. of Medicine, University of Maryland Hospital, 22 S. Greene St., Baltimore, MD 21201.*

From the beginnings of the University of Maryland School of Medicine in 1807, the principles of medicine were presented to students by a small, dedicated cadre of faculty. Lecturing in Davidge Hall, professors taught clinical medicine as it was then known. With the development of the Baltimore Infirmary in 1823 (forerunner of University Hospital), students learned from professors during rounds. Students and graduates served as house officers, probably the first example of residency training in the country. In these early days, graduation requirements consisted of passing an oral examination and preparing a thesis.

## The Chairmen 1807-1922

The first active chairman was Dr. Nathaniel Potter (Figure 1), a student of Benjamin Rush. His lectures embraced the manifestations and natural course of diseases, as well as the means of therapy. Potter insisted yellow fever was not contagious from person to person (the mosquito transmission mechanism was not described until 1900). He died in 1844.

Dr. Elisha Bartlett (Figure 2) succeeded Potter; his tenure was short, 1844 to 1846. Bartlett, one of the nation's leading medical scholars, completed his classic text on febrile illnesses while at Maryland.

William Power (Figure 3) succeeded Bartlett and chaired the Department from 1846 to 1852 when he resigned because of poor health; he died of pulmonary tuberculosis. Power, from a prominent Baltimore family, introduced the stethoscope to Baltimore. He initiated a preceptor educational program for students in bedside skills, including demonstration of the technique of percussion and the use of the stethoscope.

Samuel Chew (Figure 4) succeeded Power. Chew was a classic



**Figure 1.** Nathaniel Potter MD,  
Chairman 1807-1843.



**Figure 2.** Elisha Bartlett MD,  
Chairman 1844-1846.



**Figure 3.** William Power MD,  
Chairman 1846-1852.

scholar who emphasized the importance of complete examination, the interpretation of the history, and the rational use of medications. After Samuel Chew's death, Richard McSherry (Figure 5) directed the Department from 1863 to 1886. He was a scholarly, cultured physician who commanded much respect in the community.

Through the years up to the Civil War, students were grounded in the basic principles of general medicine which emphasized diagnosis, therapeutics, and ethical care. Because of their practice responsibilities, faculty had little chance to engage in research. Professor Charles Frick, a pioneer in experimental pharmacology from 1858 to 1886, was an exception. Frick made the initial report of chemical changes in blood produced by disease.

After the Civil War, the curriculum was strengthened and the period of instruction was lengthened. Medical school graduates were assured of having a solid background, enabling them to render high quality care. Students often fortified their positions by serving as apprentices with established physicians.

During this period, Francis T. Miles, Clinical Professor of Physiology, was the first to teach the subject of nervous diseases in Baltimore. One of his students, Henry M. Thomas, pioneered the discipline of neurology at Hopkins.

Some eminent graduates during the late nineteenth century include: Francis Donaldson (histologic diagnosis of cancer); Henry Rose Carter (epidemiology, yellow fever); William T. Councilman (pathology, yellow fever, protozoal diseases); James Carroll (yellow fever); James H. Wright (pathology, Wright's stain); Francis G. Kierle (rabies); Henry M. Thomas (medicine, neurology); and Samuel T. Darling (histoplasmosis, parasitology).

From 1886 until 1909, the Department was directed by Samuel Claggett Chew (Figure 6). His writings

demonstrate his interests and capabilities in the application of bedside clinical skills. Chew was chairman just before publication of the *Flexner Report*, which recommended faculty devote more time to educational pursuits and the development of new knowledge. Thus, beginning in 1911-1912, basic science departments but not clinical departments, were provided small salaries for positions at Maryland.

From 1913 to 1922, Dr. Gordon Wilson (Figure 7) chaired the Department on a part-time, nonsalaried basis. Schooled as a clinician after graduating from the University of Virginia Medical School, Dr. Wilson was particularly adept in diseases of the lungs.

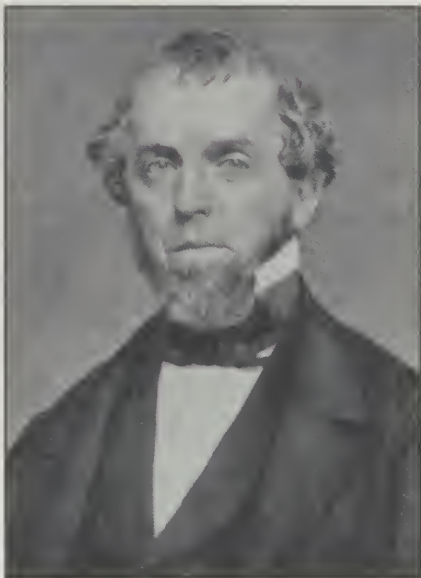
#### **Dr. Maurice C. Pincoffs, Chairman 1922-1954**

Dr. Maurice C. Pincoffs (Figure 8) was appointed chairman in 1922 and held this position until 1954 when he resigned to begin a Department of Preventive and Rehabilitative Medicine. Dr. Pincoffs, a remarkable teacher and persuasive lecturer, also understood the roles of epidemiology, preventive control measures, and emotional disturbances which were necessary to prepare the well-rounded physician. His standards were instrumental in inculcating the highest ethical principles; these precepts were imprinted upon those who studied under him.

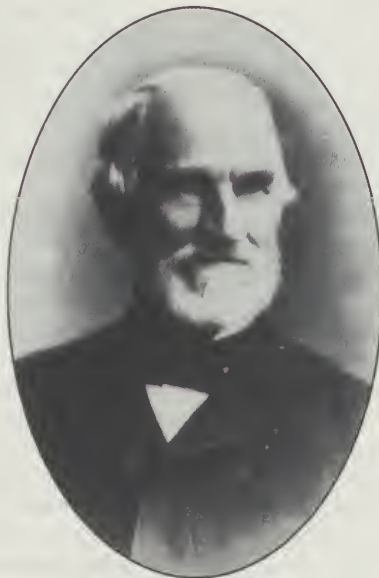
After World War II, it was apparent that departments of medicine must direct attention to research. Schools failing to engage in research would be relegated to mediocrity. The Department entered into research, recruiting physicians with either a background in investigative medicine or those who, through career development, would become investigators.

Until 1948 there were no full-time teachers in any clinical discipline at the University of Maryland Hospital. At that time, Dr. Pincoffs was paid a part-

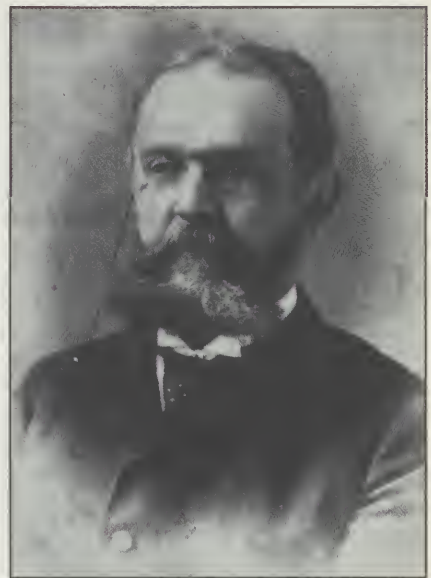




**Figure 4.** Samuel Chew MD,  
Chairman 1852-1863.



**Figure 5.** Richard McSherry MD,  
Chairman 1863-1886.



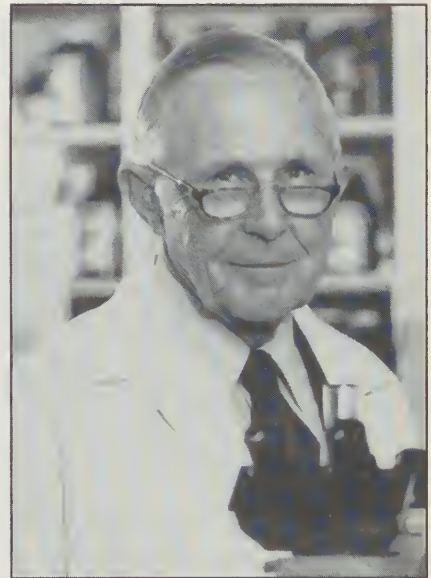
**Figure 6.** Samuel Clagett Chew MD,  
Chairman 1886-1909.



**Figure 7.** Gordon Wilson MD, Chairman  
1913-1922.



**Figure 8.** Maurice C. Pincoffs MD,  
Chairman 1922-1954.



**Figure 9.** Theodore E. Woodward MD,  
Chairman 1954-1981.

time salary as chairman. The President of the University and the Board of Regents believed certain key positions in the medical school and hospital should be filled by full-time faculty. In September 1948, Dr. Theodore E. Woodward (Figure 9) joined the Department as the first full-time member. The teaching of students and a small house staff, as well as patient care, were rendered by dedicated part-time, nonsalaried physicians in Baltimore. The structured divisions within the department were: Cardiology (Dr. William S. Love), Physical Diagnosis (Dr. Conrad Wolff), Dermatology (Dr. Harry M. Robinson, Sr.), and Clinical Pathology (Dr. John Huck). The Department's budget in 1948 was approximately \$40,000.

Beginning in 1948, new divisions were organized and

developed with active research and teaching programs being initiated in infectious diseases. The lab facilities for this work were virtually non-existent, nor was there support for investigative studies, equipment, or personnel; these were recruited from outside sources. A Division of Infectious Diseases was established on the fifth floor of the Bressler Building; Dr. Woodward was the first Director. A grant of \$10,000 from McCormick and Company, Inc. made it possible to study the efficacy of antibiotics, particularly chloramphenicol, in Baltimore and Puerto Rico. Soon diseases such as typhoid fever, Rocky Mountain spotted fever, bacterial meningitis, brucellosis, tularemia, plague, and various forms of bacteremia were investigated. The first cure for many of these diseases was a product

of this research. These beginnings were followed by grants from pharmaceutical laboratories, the Department of Defense, and the National Institutes of Health (NIH). The Fellowship Training Program was developed in The Division of Infectious Diseases and, in 1952, a unique study of infections in volunteers was initiated. Drs. Robert T. Parker, Fred R. McCrumb, Jr., and Richard B. Hornick directed the program.

Other divisions of the Department of Medicine were soon developed including Cardiology (Dr. Leonard Scherlis), Clinical Pathology (Dr. Milton Sacks), Dermatology (Dr. Harry M. Robinson, Jr.), Neurology (Dr. Charles Van Buskirk), Endocrinology-Metabolism (Drs. Thomas B. Connor and John G. Wiswell), Rheumatology (Dr. Henry J.L. Marriott, followed by Dr. Adalbert Schubart), Pulmonary Diseases (Dr. William Spicer, later Drs. Glenn Lubash and John Sadler), Nephrology (Drs. Samuel T. R. Revell and Francis Borges), Gastroenterology (Dr. W. Carl Ebeling, followed by Drs. Howard F. Raskin and Frank Iber), Nuclear Medicine - Radioactive Isotopes (Drs. Joseph B. Workman and Robert Bauer, followed by Drs. John Wiswell and Gerald S. Johnston).

A large cadre of part-time faculty members remained active. The Ambulatory Services Clinic, on the top floor of the old hospital, was directed during World War II by Dr. Kurt Levy, then placed under the directorship of Dr. Revell and later, Dr. Frank Borges. Dr. Herbert Kushner succeeded Dr. Borges. Dr. William Spicer developed a program in primary care. A strong aspect of the educational program emphasized emotional and psychosomatic disturbances. Dr. Ephraim T. Lisansky was in the forefront of stressing the need for a comprehensive approach to patients' problems.

Beginning in 1950, the affiliation with Mercy Hospital was redeveloped and a full-time program was initiated with Dr. Vernon Smith as head. Dr. Jay S. Goodman succeeded Dr. Smith who had developed a teaching and practice unit in Gastroenterology aided by a grant from the Hartford Foundation. Training under Dr. Goodman led to the development of an effective academic affiliation. There were similar developments at Maryland General Hospital with Dr. Edward F. Cotter as head, later followed by Dr. James Karns. Because of inadequate numbers of patients at the University of Maryland Hospital, medical students received much of their training at Mercy, Maryland General, Baltimore City, and the Veterans Administration (VA) hospitals. Junior students later received training at the University of Maryland or VA Hospitals when the census increased. Senior students continued to receive much of their training at the affiliated hospitals and York Hospital in Pennsylvania.

The World War II years provided an opportunity for physicians to broaden their knowledge of clinical and research medicine because of soldiers' exposure to pestilential, emotional, and traumatic hazards. Drs. Pincoffs and Krause were among faculty members who had war experiences. Too much credit cannot be given to those few who worked incessantly at home during

this five-year period. Drs. Thomas Sprunt and T. Nelson Carey directed the activities of the Department. Dr. Carey was most effective and dedicated in his role as chairman and maintained high teaching standards.

#### **Dr. Theodore E. Woodward, Chairman 1954-1981**

From 1948 to 1954, there was a period of re-evaluation and reorganization when full-time teachers appeared threatening to the part-time group. Part-time teachers were included in the planning despite busy practices. Reorganizing the school's curriculum was necessary in order for clinical departments to keep abreast of contemporary teaching practices. The Department changed to small-group, preceptor-type teaching rather than didactic lectures.

With new faculty and improved facilities, the Department was able to fulfill its roles in teaching, research, and patient care. The house officer program was underway by 1955. The preceptor course in clinical medicine for sophomore students continued to be a strong example of effective teaching. The junior and senior clerkships were successful because of dedicated attending physicians, house officers, and fellows. Medical Grand Rounds were changed from informal case discussions to formal sessions presented in Gordon Wilson Hall. Visiting educators came every three to four weeks to conduct Grand Rounds and small teaching conferences. The Department began sponsoring the Maurice C. Pincoffs Lecture, which has been given since 1957. Research programs were productive and successful. During the years 1979 to 1980, the total research budget was approximately six million dollars and the legislative budget was approximately five million.

A residency program in General Practice (now known as Family Medicine) began in the Department in 1955. Candidates who completed this training were qualified in Internal Medicine and General Practice. In 1972, this program was made an autonomous Division of Family Medicine, which later became a Department of Family Medicine, now under the direction of Dr. C. Earl Hill.

There were two important departmental developments during the early 1960s. The University received a Public Health Service grant to establish a Center for International Research and Training. The award was made to the Departments of Medicine and Microbiology with Drs. McCrumb and Charles Wisseman as co-directors. The Center was to advance the studies of the health sciences in the U.S. and other countries, stimulating research and improvement of health. Labs in Lahore, West Pakistan were constructed and in operation by 1963. Dr. Merrill J. Snyder was helpful in directing their installation. The research included work on nutrition, enteric diseases, malaria, fevers of obscure origin, demography, genetic studies of mosquitoes, rickettsioses, encephalitis, and meningitis. The Center flourished for two decades.

Another development was the opening of a Clinical Study Center sponsored by the Division of En-



ocrinology-Metabolism under Dr. Thomas Connor; it was made possible by NIH which provided funds for a ten-bed unit. This special unit which functioned for over a decade, provided long-term evaluation of patients with nutritional, metabolic, hematologic, infectious, developmental, and other disorders.

### **Baltimore Department of Veterans Administration Medical Center**

In the late 1960s, the Department established a relationship with the Baltimore VA Medical Center (DVAMC) and this affiliation was strengthened in the decades to follow. The DVAMC medical service is now a vital part of all Departmental activities. The Baltimore DVAMC and its Medical Service have undergone a metamorphosis since their inception. On October 26, 1952, the 295-bed facility began operation with the specific mission of conducting an "all-out battle against tuberculosis." The cost of construction was \$4,850,000.

When the Baltimore DVAMC opened, tuberculosis (TB) was a major public health problem. The DVAMC (Figure 10) was to provide long-term treatment for this illness. Private and semiprivate rooms replaced multi-bed wards. Special programs allowed patients to earn high school diplomas, obtain prevocational training, and develop skills in ceramics and woodwork. A radio control booth piped programs to each bedside, as well as to six bedrooms for use by out-of-town relatives visiting patients.

The same year the Baltimore DVAMC began operation, isoniazid emerged as a treatment for TB and was shortly to relegate the sanatorium to obsolescence. With the rapid decline in cases of TB requiring prolonged hospitalization, the mission of the Baltimore DVAMC changed. In 1962, ninety-five beds were converted to general medical-surgical beds, and in 1967, the facility was redesignated a general hospital. The Medical Center strengthened its ties with the two Baltimore medical schools, and developed training programs in Medicine, Surgery, Radiology, Neurology, Pathology, and Anesthesiology.

Today, the Medical Service enjoys a close affiliation with the Department. Each member of the clinical staff has an academic appointment with the tripartite responsibility of patient care, teaching, and medical research. The Medical Service has sixty acute care beds, seven cardiac care unit (CCU) beds, and seven medical intensive care unit (MICU) beds. Approximately 3,500 patients are admitted each year. Subspecialty and general medicine clinics handle 34,000 patient visits annually. Although a meaningful interplay between the Baltimore DVAMC and the University of Maryland School of Medicine has existed since the Medical Center's inception, this integration is now complete. All elements of the educational pro-

gram of the Medical Service are incorporated into the curriculum.

The Medical Service's most gratifying progress in recent years has been in the area of research. In the past five years, the number of funded investigators has increased from twelve to thirty-one. Research dollars awarded have risen from \$588,124 to \$8,261,785 annually. Seventeen investigators are funded by federal agencies, including four with VA career development awards. The research conducted covers a broad range of interests.

The immediate future of the Baltimore DVAMC is linked to a replacement facility (Figure 11) that will become a reality in 1992. The new 324-bed facility will be located adjacent to the University Hospital. The structure, with a glass and red-flecked granite exterior and an atrium rising six floors, will house 700,000 square feet of space (twice the amount in the existing facility), and an underground garage with 700 parking spaces. To facilitate cooperative efforts, a bridge will connect the new DVAMC with University Hospital. The cost of building and equipping the facility is roughly \$100,000,000.



**Figure 10.** The Baltimore Veterans Administration Hospital which opened in October 1952.



**Figure 11.** The new Baltimore Department of Veterans Administration Medical Center is scheduled to open in the fall of 1992.



## Integration of the Medical Service

Until the early 1950s, no black medical students or house officers were members of the student body or the medical house staff training program at the University of Maryland School of Medicine and its hospital. Dr. Ernest O. Brown, who was probably the first black medical student, graduated in 1956 and trained in surgery. Dr. Louis L. Randall graduated the next year and took his house officer training in Obstetrics and Gynecology at the University of Maryland Hospital. Then in 1960, three black students, Drs. Elijah Saunders, Frank Washington, and Lois Young (later Dr. Lois Young-Thomas), graduated in Medicine from Maryland. Dr. Saunders, whose experience in integrating the medical services is described below, trained in Internal Medicine and Cardiology at the University of Maryland Hospital, and is now a senior faculty member in the Department. Dr. Young-Thomas became a distinguished ophthalmologist and was a valued faculty member at the University of Maryland and Johns Hopkins hospitals until her untimely death in 1986.

It is regrettably true that most southern medical schools, including those in Baltimore, practiced segregation of the races on the ward teaching services. The University of Maryland Hospital was no exception to this practice. During the 1950s and early 1960s, most patients who occupied the so-called "free" ward beds, came on referral from physicians who practiced in rural areas. Other sources of patients on the teaching services came from the emergency room or the outpatient clinics. This system, albeit selective, provided a balance of patient clientele with differing medical problems, affording the medical student a broad representation of medical syndromes. (Medical problems presented by rural patients often differed from those of patients who came from the city.)

In 1962, the Department Chairman, Dr. Theodore E. Woodward, met with prominent black physicians and civic leaders, as well as the director of the University of Maryland Hospital to discuss this problem. The reasons for the segregated services were explained. There was open and free discussion between all of those in attendance. It was agreed at this meeting that the ward services would be fully integrated with the aim being to maintain a balanced and effective teaching service and, accordingly, the male ward services were integrated. Black house officers and others serving in Medicine were very helpful in implementing this important change, particularly through admission practices. Meanwhile, various senior faculty members conducted regular teaching seminars at Morgan State University in order to encourage black students to attend medical school; this proved to be effective.

However, by 1964, the female medical wards were still segregated by race and sex. This situation was offensive to many, but especially to two house officers who were members of minorities: Dr. Elijah Saunders, who was the first black house officer and a cardiology fellow in the Department (1960-1965), and Dr. Herbert A. Kushner, who was a resident in Medicine in 1964. They shared a distaste for this medically unreasonable policy which was not actively promoted, but passively accepted. Movement toward complete integration seemed to have slowed down in spite of the fact that it was then ten years since the Supreme Court had struck down "separate but equal" practices in public education. They discussed ways to integrate the wards to remove any perception of unequal care.

One night when the only beds available were on the white female ward, a black woman presented to the emergency room in pulmonary edema. The medical indications were clear; they admitted the black patient to the white ward. For the next several days, all sorts of repercussions were expected. Interestingly enough, no explosions occurred, although there was much talk among the house staff, nursing staff, medical and nursing students, and patients.

Gradually, the pattern moved from an occasional "integrated admission" to complete and full integration of patients on the medical ward service. De facto desegregation had become de facto integration. Thus, the protocol for admitting patients according to illness and not according to race was established.

Further improvement of minority participation in Department of Medicine activities occurred in the early 1970s when Dr. George Finney, Sr. asked the Department of Medicine to assist Provident Hospital in developing a house officer training program. Toward this end, the chairman and senior faculty members conducted regular Grand Rounds and seminars at Provident Hospital. Medical graduates from Howard University and other medical schools were encouraged to choose Provident Hospital for their training with the understanding that much of their experience in Internal Medicine and subspecialties would be taken at the University of Maryland Hospital, particularly in Medicine. This was effectively implemented.

Dr. Charles Payne, an internist with specialty experience in pulmonary diseases, was recruited from Cleveland to serve as Chairman of Medicine at Provident Hospital, with a joint appointment in the Department of Medicine at the University of Maryland. Physicians who participate in teaching programs at Liberty Medical Center, the successor to Provident Hospital, continue to hold faculty appointments at Maryland. ■

The Baltimore DVAMC Medical Service looks forward to a productive future. While continuing to fulfill its original mandate of caring for veterans with TB, it will also minister to those with other medical

problems. Included in the new facility are a ten-bed chronic dialysis unit, a tertiary-care cancer program, and an invasive cardiac catheterization lab with cardiac surgery backup provided through University Hospital.



State-of-the-art endoscopy suites will augment the capabilities of both the Gastroenterology and Pulmonary sections. A fully-equipped, fifteen-bed Special Diagnostic and Treatment Unit will be used to support clinical research. Preliminary steps have also been taken to build a comprehensive geriatric program, including acute care, outpatient, home-care, and nursing home programs, as well as active research and education programs. Finding the resources (i.e., finances, personnel, and space) to meet our obligation to our aging veteran population could prove to be one of the greatest challenges on the way to the twenty-first century.

### Medical Education

From its inception in the early nineteenth century, the University of Maryland School of Medicine has had a commitment to training practicing physicians for the State and surrounding areas. This commitment has been met particularly by the Department of Medicine.

The Department has educational responsibilities at multiple levels. Many faculty participate in the basic science courses given during the first two years of medical school, and have secondary appointments in basic science departments. *Introduction to Clinical Practice*, which runs throughout the sophomore year, teaches history-taking, physical examination, and problem-solving. Groups of two students meet weekly with preceptors, with half of the groups taught at the University of Maryland Hospital and the Baltimore DVAMC by full-time faculty, and the remaining groups at affiliated institutions by volunteer faculty. The Department is indebted to its volunteer staff for this teaching commitment which enriches our program. A significant number of careers in Internal Medicine have begun because of the profound impression these faculty have made on our students.

Junior students complete a twelve-week clerkship in Internal Medicine, spending one month each at the University of Maryland Hospital, the Baltimore DVAMC, and the Mercy Medical Center. Assigned to wards in groups of two to three, they assume increasing responsibility under the supervision of the resident and attending physician. Each morning, faculty members meet with students to present various topics. Students participate in work rounds and attending rounds, and follow patients throughout their hospital course, refining their diagnostic, problem-solving, and therapeutic skills. At the University Hospital, students are also assigned a preceptor who meets with them twice weekly to review cases, allowing faculty to teach one-on-one.

Senior students must take a two-month sub-internship, and most take it in Internal Medicine. Students spend one of the two months at either the University of Maryland Hospital or the Baltimore DVAMC. The remaining month may be spent at one of these institutions or at an affiliated hospital. Seniors have four months of electives, and many opt for rotations in the Department's subspecialties. Although, nationally, there has been a downward trend in graduates entering

primary care specialties, especially Internal Medicine, this does not seem to have affected the University of Maryland. Whereas fewer than 20 percent of graduating seniors nationally enter Internal Medicine or its subspecialties, more than 30 percent of our graduates enter this field. Many who have gone into Internal Medicine at other academic institutions have become chief medical residents.

The Department has a major commitment to postgraduate training. Approximately twenty-two graduating seniors from around the country enter our residency program annually. An additional eleven graduates are selected for a one-year internship, preparatory for training in other specialties such as Neurology, Psychiatry, and Anesthesiology. Approximately 25 to 30 percent of the interns are graduates of the University of Maryland. From 1969 to the present, training has been conducted at the University of Maryland Hospital and the Baltimore DVAMC. On July 1, 1990, our training program integrated with the residency program at Mercy Medical Center. This integration with a community hospital enhances patient mix and provides trainees with experiences that will prepare them for private practice.

Our postgraduate training program has two tracks. One track, designed for individuals who intend to practice general Internal Medicine, emphasizes ambulatory medicine and experiences in non-internal medicine specialties (e.g., Psychiatry, Gynecology, Ophthalmology, Orthopedics). Approximately six house officers elect this track each year. The other track is more traditional, preparing house staff for the practice of general Internal Medicine, a career in a medical subspecialty, or a career in academic Internal Medicine. The experiences in the two tracks are merging, as we emphasize ambulatory training in both tracks in response to the demands of practice. Dr. Susan Wolfsthal, Director of Ambulatory Medicine Education, has developed programs at physicians' offices, adult day-care centers, and the clinics at the University of Maryland Hospital and the Baltimore DVAMC.

All residents have eight months of elective time and may spend it in medical subspecialties, in nontraditional areas such as Psychiatry or Pediatrics, in a private practice setting, or in research. Approximately 80 percent of the house staff completing training in 1989 went on to additional training in a subspecialty or in general Internal Medicine. Many remain in Maryland following their residency, while others enter fellowships or practices throughout the United States.

Finally, the Department has a major commitment to continuing medical education. At least ten to twelve courses are given annually by the Department's divisions to enrollees from Maryland and surrounding areas. The Department will continue to provide educational opportunities for our community, and benefits from these interactions with colleagues. The Department continues to carry on this longstanding tradition of excellence in the education of students, postgraduate trainees, and practicing physicians in Maryland. ■

# P.I.E.'s quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. P.I.E. Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

## **QRP FACTS:**

**Strict Underwriting Criteria** — Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

## **Scheduled Premium Reductions** —

Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

**High Limits** — Backed by our reinsurer, Lloyd's of London, P.I.E. is able to offer higher coverage limits for qualifying doctors: up to

\$7 million for individual doctors and \$13 million for group policies. Lloyd's of London is the largest reinsurer in the world.

## **Designed With Input from Doctors** —

P.I.E.'s QRP plan is an innovative modified claims-made insurance specially designed with input from P.I.E.-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your P.I.E. representative, or our headquarters office today.

---

THE P.I.E. MUTUAL

---

INSURANCE COMPANY

---

North Point Tower • 1001 Lakeside Ave. • Suite 1800  
Cleveland, OH 44114-1149 • (216) 736-8400 • (800) 228-2335

---

Winterich • Neff & Associates  
7 East Redwood • Suite 810  
Baltimore, Maryland 21202  
(301) 234-2800





---

# Improving Preventive Care in General Medical Practice

---

Dorothy A. Snow MD, MPH

---

*Dr. Snow is Assistant Professor of Medicine at the University of Maryland School of Medicine and Associate Chief for Education at the Baltimore Department of Veterans Administration Medical Center. Reprints: Dr. Snow, Office of Medical Education (14A), DVAMC, 3900 Loch Raven Blvd., Baltimore, MD 21218.*

---

*Specific efforts are necessary if physicians are to be in compliance with nationally recognized guidelines for screening, patient counseling, and immunizations. Interventions include the use of checklists, computer reminders, audits with feedback, patient education and reminders, and the use of nursing personnel.*

---

There is a developing consensus in the literature that the targeted periodic health exam should replace the routine "complete history and physical." There is also agreement that preventive health care must focus on screening; patient counseling; and immunizations for conditions, illnesses, and risk factors based on the individual patient's demographic characteristics and lifestyle. The Report of the U.S. Preventive Task Force, *Guide to Clinical Preventive Services*,<sup>1</sup> provides a useful assessment of the effectiveness of 169 interventions, and includes summary tables delineating recommended care. A summary of recommendations for asymptomatic low-risk adults is presented in the Table. The American Cancer Society (ACS) goes further in recommending additional cancer screening with specific recommendations for asymptomatic, low-risk individuals for sigmoidoscopy, fecal occult blood testing, digital rectal examination, and endometrial sampling at specified time intervals. The recommendations of other groups differ in specifics but also emphasize a focused examination.

It is unknown, however, to what extent such guidelines on prevention have reached the mainstream medical community and more importantly, to what degree primary care physicians in office-based practice comply with established recommendations. Available information suggests that levels of compliance with many consensus recommendations are low. Further, it appears that improvements in compliance are not a direct function of physician or provider knowledge with respect to the value of screening or the consensus recommendations. Even physicians' own opinions about optimum interventions do not accurately predict their test-ordering behaviors.<sup>2</sup> Without specific strategies to improve physician compliance, recommended immunizations, screening procedures, and patient counseling are not performed at acceptable rates in a variety of settings, both academic and private.

Academic settings with well-supervised care should provide an optimum site for preventive interventions and high levels of compliance with current recommendations. This, however, is not the case. Mandel et al<sup>3</sup> reviewed the records of a Family Medicine

residents' practice over a five-year period. A written explanation of screening guidelines adopted by the practice was provided in each patient record given to new residents entering the program, but no other encouragement was offered. Although recommended by the practice, it was found that none of the patients over fifty-five had screening sigmoidoscopy, only 53 percent of patients over forty-nine received fecal occult blood testing and only 70 percent of women over eighteen had received Pap smears. Morris and Morris<sup>4</sup> also evaluated preventive practices in a Family Medicine residents' clinic. In this study, forms listing the ACS recommendations for breast examination, mammography, pelvic examination, Pap testing, digital rectal examination, and fecal occult blood testing, as well as the Immunization Advisory Practices Committee recommendations for influenza and pneumococcal vaccines were kept in every resident's examination room. Rates of compliance with recommendations for rectal examinations, Pap smears, mammography, and influenza vaccination were 6 percent, 31.5 percent, 4 percent, and 23 percent, respectively. Another study examining the performance of preventive care in a Veterans Administration Hospital continuity care clinic staffed by Internal Medicine residents found that traditional elements of the periodic health examination were likely to be performed, as over 85 percent of patients had received histories and physical examinations, complete blood counts, electrolytes, chest radiographs, urinalyses, weight measurements, blood pressure determinations, and electrocardiograms. However, compliance was lower for cholesterol screening (51 percent) and for cancer screening procedures (17 to 50 percent). Compliance was lowest for influenza vaccination with only 12.5 percent of high-risk men and none of the high-risk women having received vaccination in the previous season.<sup>5</sup>

The results obtained when evaluating performances by both academic and private physicians are also below standard. In an Internal Medicine faculty practice, McPhee et al<sup>6</sup> evaluated the performance of seven cancer screening tests. Using ACS recommendations for comparison, stool occult blood testing was performed only 28 percent, rectal examination 29 percent, sigmoidoscopy 0.3 percent, Pap smear 22 percent, pelvic examination 28 percent, breast examination 39 percent, and mammography 13 percent of the standards. Four major reasons for not performing the screening tests were given by providers: forgetfulness, lack of time, inconvenience and logistical difficulties, and patient discomfort or refusal. A 1989 survey of 1,029 practicing primary care physicians showed that only 49 percent were routinely performing rectal examinations; 56 percent fecal occult blood testing; 37 percent mammography; 55 percent Pap testing; and 23 percent sigmoidoscopy, in accordance with the ACS guidelines. These results were little changed from a similar survey completed five years earlier, and failure to perform these tests did not reflect simply a disagreement with the testing guidelines.<sup>7</sup>

In an effort to improve the performance of preventive interventions, many strategies have been employed. Among them are checklists, computer reminders, audits with feedback, patient education and reminders, and the use of nursing personnel. These strategies will be discussed below.

### Checklists

Checklists, prompts, or flow sheets attached to charts may serve as useful reminders for physicians to perform appropriate preventive care during a patient visit. Various forms of checklists have been evaluated in a variety of settings and shown to bring about significant improvements in the performance of breast examinations, mammography, and fecal occult blood tests. Advantages of a checklist include low cost and easy implementation. Physicians can design their own form emphasizing preventive interventions determined important or necessary by their own practice. The presence of a checklist or flow sheet also improves the organization of the chart, potentially serving as the problem list for prevention and allowing an indexing of the medical chart.

Disadvantages of a checklist are, first, compliance with filling out the checklist is not uniform. A prospective study was conducted to determine whether screening flow sheets and physician education, combined with other mechanisms, would improve performance of selected health maintenance procedures in a private practice setting. There was a significant improvement in overall compliance with guidelines from 40 percent to 72 percent, but the screening flow sheet, present in all charts, was completed in only 29 percent of patients' charts.<sup>8</sup> The second disadvantage is that initial gains seen in performance may be lost over time.

### Computer Reminders

Computerized medical databases can potentially improve problems in collecting, interpreting, and communicating clinical information. Computerized systems have been developed to allow organization of clinical information and generation of patient-specific reminders with respect to preventive care. Studies which have evaluated the effect of computerized systems on health care delivery have shown improvement in the process of care.<sup>9</sup> In a randomized, controlled trial to evaluate three interventions promoting cancer screening, computer-generated reminders were found to increase performance of six of seven tests audited.<sup>10</sup> Influenza vaccination rates have also been improved with computer-generated reminders.

Advantages of a computerized system include abilities to readily retrieve, organize, and analyze data. Disadvantages include start-up costs for hardware and software, and for transfer of the existing recordkeeping system into the database.

### Audits with Feedback

Chart audits with feedback to the physician have



proven to be an effective tool in improving the performance of a variety of preventive interventions such as influenza vaccination<sup>11</sup> and cancer screening. Audits have proven effective in group practices and academic settings. They may be directed at individual physicians or to groups of physicians. Advantages of audits are that they may serve to educate physicians, may foster discussions about the appropriateness of guidelines adopted by the practice, and may be integrated easily into existing quality assurance programs. Disadvantages include the time-consuming nature of the chart audit and its unsuitability for solo practices.

### Patient Education and Reminders

Patient involvement in preventive health care through the use of reminders and patient education materials has been shown to improve performance of certain preventive interventions. Postcard reminders to patients concerning influenza vaccination in the fall are widely used to increase rates of vaccination.<sup>12,13</sup> Birthday reminders for periodic health screenings are also used. A randomized trial of the effect of patient-carried reminder cards on the performance of health maintenance measures demonstrated effectiveness in improving rates of influenza vaccination, rectal examinations, fecal occult blood testing, Pap smears, and breast examinations.<sup>14</sup> Patient involvement in prevention through questionnaires and patient education has also been shown to improve performance of mammography.<sup>10</sup>

Advantages of patient education and reminders include increased participation of patients in their own health care, ease of implementation of such systems, and advantages to the practice from a public relations standpoint.

### Use of Nursing Personnel

The optimum use of non-physicians in preventive care is, to date, under-explored. It is recognized that nurses can perform some preventive care tasks as well as physicians, and that nurses or other allied health professionals may enhance physicians' efforts. Three strategies to enhance colorectal cancer screening (provider education, chart reminders, and distribution of self-administered fecal occult blood test kits) were evaluated in an Internal Medicine residents' primary care clinic. Only the distribution of the self-administered kits with instructions by nursing personnel resulted in an increase in screening. This study also indicated that screening procedures built into the practice setting through a protocol may have a higher success rate.<sup>15</sup>

A randomized trial in a London general practice specifically addressed the issue of the nurse's role in preventive activities. This study evaluated risk factor ascertainment and follow-up by general practitioners as compared to a general practitioner/health promotion nurse team. The physician/nurse team had significantly higher compliance with all standards examined.<sup>16</sup>

An advantage of the use of allied health professionals is the freeing of physician time for other aspects of medical care. The major disadvantage is that of the financial investment required if these personnel are not already employed.

### Choosing the Interventions

The choice of which preventive measures are to be adopted in a practice should be determined by the nature of the patients, their habits, lifestyles, and, consequently, their major causes of mortality and morbidity. The number of interventions recommended by, for example, the United States Preventive Task Force is lengthy, with many recommendations varying by risk group. In a brief patient encounter, priorities must be set and followed if an impact is to be made by preventive efforts. Clinicians must be aware of the epidemiology of morbidity and mortality within their practice. Examining the leading causes of death by age group (Table) makes it obvious that an approach to prevention must be individualized. In the young adult population where accidents and violence claim the most lives, patient counseling in these areas may be the most important preventive intervention to undertake. Counseling to prevent sexually transmitted disease may markedly reduce morbidity and mortality in this group as well. Emphasis should also be placed on nutrition and abstention from smoking, since coronary heart disease becomes the leading cause of death in the next age group. For individuals over sixty-five years of age, emphasis might be placed on the maintenance of independence and a high quality lifestyle through vision and hearing screens, and counseling on fall prevention. Clearly, the decision about which interventions are to be priorities will differ from one patient and practice to another.

Improving compliance with guidelines for preventive care will only be achieved if physicians recognize the benefits of health maintenance and are motivated to increase preventive services within their practice. When this is combined with strategies to increase adherence to guidelines developed for the specific practice setting, the results may be highly successful.

### References

1. United States Preventive Services Task Force. Guide to Clinical Preventive Services. Baltimore: Williams and Wilkins, 1989.
2. Woo B, Woo B, Cook EF, Weisberg M, Goldman L. Screening procedures in the asymptomatic adult: Comparison of physicians' recommendations, patients' desires, published guidelines and actual practice. *JAMA*. 1985;254:1480-4.
3. Mandel IG, Franks P, Dickinson JC. Screening guidelines in a family medicine program: A five-year experience. *J Fam Pract* 1982;4:901-7.
4. Morris PD and Morris ER. Family practice residents' compliance with preventive medicine recommendations. *Am J Prev Med* 1988;4:161-5.
5. Lefkowitz A, Snow DA, Cadigan DA. Preventive care in a veterans administration continuity clinic. *J Community Health* 1990;15:7-18.
6. McPhee SJ, Richard RJ, Solkowitz SN. Performance of cancer screening in a university general internal medicine practice: Com-

# No paperwork. No hassle. No kidding.

Electronic claims processing reduces your paperwork, verifies your claims in 24 hours and saves you money every time you file a claim. If you use a computer for billing, LifeCard Provider Network can link your system with most major insurance carriers. If you're not currently using a computer, we'll help you get started.

## LifeCard links your office with:

Aetna Life  
Benefit Trust  
Blue Cross & Blue Shield of MD  
Cigna  
Confederation Administration  
Confederation Life  
Equicor  
Great Southern Life

Life of Georgia  
Lincoln National  
Maryland Medical Assistance  
Medicare B  
Metropolitan Life  
Mutual of Omaha  
National Capital BC/BS

Pacific Mutual  
Philadelphia American Life  
Philadelphia Life Insurance  
Principal Mutual  
State Mutual Life  
The New England  
Willse

Join the more than 1200 Maryland providers who already enjoy the benefits of paperless claims handling. Call your LifeCard marketing representative today.

**301-494-4800**

## Provider Assistance and Relations



### *Elegant Conservatories by Sun Room Company*



OPEN YOUR HOME to the brightness and warmth of the sun by day and to the romance of the moon and stars by night.

OUR CLASSIC OR CONTEMPORARY solarium designs will complement your style and taste PERFECTLY!

Baltimore, Maryland  
1-800-882-4657



SUN ROOM COMPANY, INC.

**Ever wanted to meet  
Dr. C. Everett Koop,  
Marilyn Quayle, or Dr.  
Antonia Novello?**

**...see page 223**

parison with the 1980 American Cancer Society guidelines. *J Gen Intern Med* 1986;1:275-81.

7. American Cancer Society. 1989 survey of physicians' attitudes and practices in early cancer detection. *CA* 1989;40:77-101.

8. Frame PS, Kowulich BA, Llewellyn AM. Improving compliance with a health maintenance protocol. *J Fam Pract* 1984;19:341-4.

9. Haynes RB and Walker CJ. Computer-aided quality assurance: A critical appraisal. 1987;147:1297-1301.

10. McPhee SJ, Bird JA, Jenkins CNH et al. Promoting cancer screening: A randomized controlled trial of three interventions. *Arch Intern Med* 1989;149:1866-72.

11. Barton MB and Schoenbaum SC. Improving influenza vaccination performance in an HMO setting: The use of computer-generated reminders and peer comparison feedback. *Am J Public Health* 1990;80:534-36.

12. Larson EB, Bergman J, Heidrich F, Alvin BL, Schneeweiss R. Do postcard reminders improve influenza vaccination compliance? *Med Care* 1982;20:639-48.

13. McDowell I, Newell C, Rosser W. Comparison of three methods of recalling patients for influenza vaccination. *Can Med Assoc J* 1986;135:991-7.

14. Turner RC, Waivers LE, O'Brien K. The effect of patient-carried reminder cards on the performance of health maintenance measures. *Arch Intern Med* 1990;150:645-7.

15. Struwing JP and Snow DA. Improving compliance with colorectal cancer screening in a residents' clinic. *Clin Res* 1989;37:815A.

16. Robson J, Boomla K, Fitzpatrick S et al. Using nurses for preventive activities with computer-assisted follow-up: A randomized control trial. *Br Med J* 1989;298:433-6. ■



# Table. Guidelines for the Periodic Health Visit for Asymptomatic, Low-risk Adults, Ages 19 and Over

Schedule: Ages 19-64, every 1-3 years; ages 65 and over, yearly or as noted.

## LEADING CAUSES OF DEATH

### Ages 19-39

Motor vehicle accidents  
Homicide  
Suicide  
Injuries  
Heart disease

### Ages 40-64

Heart disease  
Lung cancer  
Cerebrovascular disease  
Breast cancer  
Colorectal cancer  
Obstructive lung disease

### Ages 65 and over

Heart disease  
Cerebrovascular disease  
Obstructive lung disease  
pneumonia/influenza  
Lung cancer  
Colorectal cancer

## SCREENING

### History

Dietary intake  
Physical activity  
Tobacco/alcohol/drug use

### Over 64 years of age:

Prior symptoms of transient  
ischemic attacks (TIA)  
Functional status at home

### Physical Exam

Height and weight  
Blood pressure

### Over 39 years of age:

Clinical breast exam yearly

### Over 64 years of age:

Visual acuity  
Hearing and hearing aids

### Laboratory/Diagnostic Procedures

Non-fasting total blood cholesterol

### Over 65 years of age:

Pap smear every 1-3 years

### Age 50-75:

Mammogram every 1-2 years

### Over 65 years of age:

Dipstick urinalysis  
Thyroid function test (women)

## COUNSELING

### Diet and Exercise

Fat  
Caloric balance  
Selection of exercise program

### Injury Prevention

Safety belts  
Smoke detectors  
Smoking near bedding or upholstery

### Dental Health

Regular dental visits,  
toothbrushing, flossing

### Substance Use

Tobacco  
Alcohol and other drugs

### Young males:

Violent behavior  
Firearms

### Other

Over 65: Glaucoma testing  
by eye specialist

### Sexual Practices (under 65)

Sexually transmitted disease  
Unintended pregnancy/contraception

### Over 65 years of age:

Fall prevention  
Hot water heater temperature


## IMMUNIZATION

Tetanus-diphtheria (td) booster  
every ten years

### Under 65 years of age:

Influenza vaccine yearly  
Pneumococcal vaccine (one time)

(Adapted from the U.S. Preventive Services Task Force)



*"Nah,  
I've smoked  
for  
30 years.  
It's too late."*

*"I've tried a  
million times,  
but I just  
can't."*

*"I'll  
quit  
next  
week."*

*"I'll quit  
next year."*

*"What difference does  
it make? I'm already  
52 years old."*

*"It's one of the  
few pleasures  
I have left."*

*"I've got  
other things  
to worry about."*

*"The damage  
is done."*

## **They know why they can't. Now tell them how they can.**

Too many older smokers are still making excuses instead of making a determination to quit. And while most of them know about the more common long term effects of smoking, far too few of them know the facts about the immediate health benefits of quitting.

As a doctor, you can play a unique role in getting your older patients who smoke to quit for good. Take a little extra time and educate your patients about the immediate benefits of quitting. Like a decreased risk of heart attacks and strokes. Improved circulation. And most of all, the years they can add to their lives.

So listen to their reasons for not quitting, then go ahead and give them the facts.

**Let them know:  
it's never too late to quit.**

For a free copy of "Clinical Opportunities for Smoking Intervention:  
A Guide for the Busy Physician," complete the form below.

Mail to:  
**The National Heart, Lung, and Blood Institute  
Information Center  
4733 Bethesda Avenue, Suite 530, Bethesda, MD 20814  
(301) 951-3260**

Name \_\_\_\_\_

Specialty \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



---

# The HIV Epidemic and the Primary Care Physician

---

Jonathan A. Cohn MD and John W. Warren MD

---

*From the Division of Infectious Diseases, Department of Medicine, University of Maryland School of Medicine, Baltimore, where Dr. Cohn is Assistant Professor of Medicine, and Director of the Adult AIDS Clinical Program and the Maryland AIDS Professional Education Center; and Dr. Warren is Professor of Medicine and Head of the Infectious Diseases Division. Supported in part by Maryland State contract DHMH 90-960G and Grant 5 D35 PE00026-03 through the Health Resources and Services Administration, Bureau of Health Professions, Division of Medicine. Reprints: Jonathan Cohn MD, Maryland AIDS Professional Education Center, University of Maryland Hospital, 22 South Greene St., Box 243, Baltimore, MD 21201.*

---

*It is expected that 80,000 new cases of AIDS will be reported in 1992. Physicians need to equip themselves with knowledge to apply toward case-finding, patient management, and prevention of further spread of the virus.*

---

In response to the HIV (human immunodeficiency virus) epidemic, the Division of Infectious Diseases has developed a variety of AIDS-related (acquired immunodeficiency syndrome) activities. Our Adult AIDS Clinical Program provides coordinated clinical and psychosocial services for HIV-infected persons, and trains our students and house staff in AIDS care. Recently, through funding from the University of Maryland Medical Systems, the Human Resources Services and Administration, and the Maryland Department of Health and Mental Hygiene (DHMH), we created the Maryland AIDS Professional Education Center (MAPEC) in order to include other health care providers in Maryland in our AIDS education efforts. MAPEC's activities include our annual symposium, *AIDS: A Challenge for Primary Care*; lectures and courses for physicians and other health care professionals throughout the State; and clinical training based at the University of Maryland at Baltimore. This article will describe the conceptual basis for our educational outreach program to Maryland's primary care providers.

## Why Primary Care?

Several issues are germane to understanding the involvement of primary care physicians in the care of AIDS patients. One is simply that the large number of patients who are or who will become infected will require the services of a large number of providers throughout the state. Secondly, the nature of HIV disease lends itself to the role of primary care physicians, who traditionally offer their patients continuity and coordination of care in addition to direct medical services.<sup>1</sup> Thirdly, and perhaps most

importantly, the participation of primary care physicians is crucial to the success of HIV-prevention efforts.

*The Epidemiology of AIDS and HIV Infection in Maryland.* Current State regulations require that physicians report both cases of CDC-defined (Centers for Disease Control) AIDS and all patients with symptomatic HIV infection.<sup>2</sup> The data on AIDS cases are more complete than the data on symptomatic HIV infection. Therefore, most of the information on the epidemic in Maryland is based on reported cases of AIDS. According to DHMH, the cumulative number of AIDS cases in Maryland through September 1990 was 2,967.<sup>3</sup> Maryland ranks eleventh in the absolute number of reported AIDS cases among the states and territories, as determined by the CDC.<sup>4</sup> Data from the CDC also indicate that the annual incidence of AIDS in Maryland is 23.2 per 100,000, placing Maryland seventh among the states and territories.

The demographic figures in Maryland differ somewhat from those of the country as a whole. The majority of people with AIDS in Maryland are black (60 percent), whereas nationwide there are more AIDS cases among whites than blacks (55 percent v 28 percent). Homosexuality is the most frequently reported risk factor for men with AIDS in Maryland (62 percent), as it is in the U.S. as a whole (66 percent). Intravenous drug use is the second most commonly reported risk behavior for men in Maryland (22 percent) and the U.S. (18 percent), but intravenous drug use as a percentage of reported cases is rising more rapidly in Maryland than nationwide. The proportion of women with AIDS in Maryland (18 percent) is nearly double the national rate for women (10 percent). Among women with AIDS, the most common risk behaviors, both locally and nationally, are intravenous drug use and heterosexual contact with an intravenous drug-using partner. The prevalence of HIV infection among women giving birth in Maryland rose significantly from 1988 (31 per 10,000 births) to 1989 (42 per 10,000). The HIV-infection rate among black women giving birth in Maryland increased from 74 per 10,000 in 1988 to 107 per 10,000 in 1989. Although most cases in Maryland are still reported from metropolitan areas, every county in the State has reported at least a few cases.<sup>3</sup> The CDC has described national trends of increases in the proportion of minorities, intravenous drug users, and women who are HIV-infected, as well as a wider geographic distribution of cases.<sup>5</sup> These national trends reflect the shifts occurring among AIDS cases in states such as Maryland, where the epidemic is already advanced.

If the present number of men, women, and children with AIDS throughout our State were not enough to demand our attention, the projections for the number of HIV-infected persons in Maryland should. DHMH estimates that there are between 16,000 and 28,000 Maryland residents with HIV infection.<sup>6</sup> This figure is derived from a model using reported cases of AIDS, and will underestimate the HIV epidemic to the extent

that AIDS cases are underreported. Despite this uncertainty, it appears that there are tens of thousands in the State who are infected now, and who now or in the future will require care. Ironically, the majority of them do not know they are infected. Clearly, providing services to these people will require a coordinated effort by all of us. The small number of infectious disease specialists in Maryland will not be able to provide all of the care needed.

*The Nature of HIV Disease.* Ongoing natural history studies of HIV infection have shown that the median incubation period, from acquiring HIV infection to developing CDC-defined AIDS, is ten years.<sup>7</sup> When the epidemic was first recognized eight years ago, only the most advanced disease, AIDS, was diagnosed and treated. Now there are increasing numbers of therapies which can be offered to asymptomatic and mildly symptomatic persons, with the hope of prolonging their survival and improving their quality of life, or both.<sup>8-11</sup> However, for these interventions to be successful, persons with early HIV infection must be identified and receive care over time. Both case-finding and clinical interventions can be performed readily by primary care physicians on an outpatient basis. Without the participation of primary care practitioners, it is difficult to imagine how tens of thousands of persons will be identified and then receive appropriate care over a decade or longer.

As HIV infection progresses from the asymptomatic to the symptomatic stage, multiple organ systems are involved with several kinds of pathological processes. HIV itself has been proven to directly involve the immune and nervous systems, and possibly other organ systems as well.<sup>12</sup> Additionally, the opportunistic infections, cancers, and other syndromes which occur in persons with advanced HIV disease can involve virtually every organ system. Consequently, no one subspecialty can provide all the medical services a person with advanced HIV disease may require. The primary care physician is well placed, however, to coordinate the services of a variety of medical and surgical subspecialists, as well as supportive services for counseling, support groups, or home care.

### **The Role of Primary Care Providers in the HIV Epidemic**

*Prevention.* In the absence of a safe and effective anti-HIV vaccine, the only modes of prevention available are health education and behavior modification. Community organizations and public health agencies have been providing information to the public on HIV transmission.<sup>13,14</sup> Two strategies are in use: one is to provide information to the general public, and the other is to target information to high prevalence areas and persons with high-risk behaviors. These activities are extremely important but will be more effective if combined with one-on-one counseling. Primary care physicians can play an important role in reinforcing public health information so as to prevent their



patients from initiating or continuing high-risk behaviors. The combination of media campaigns and school-based education with physician counseling has been effective in reducing cigarette smoking and dietary intake of saturated fat and cholesterol. Similar programs must be developed to help contain the HIV epidemic. Physicians providing family-planning services must integrate education about HIV transmission into their practices. All physicians should identify patients who have or are developing a drug-dependency problem in order to refer those patients for treatment before they have parenteral exposure to HIV. All physicians must become comfortable and non-judgmental in obtaining sexual and drug-use histories. Counseling by primary care physicians can also have an important role in reducing patients' unwarranted fears about HIV (e.g., in families who are concerned because there is an HIV-infected child in their child's school).

*Case Finding.* Obtaining accurate information on patients' risk behaviors is a necessary step in identifying those persons who are unknowingly infected with HIV. The fifty-two designated HIV-testing and counseling sites operated by DHMH confirmed HIV infection in only 2,138 individuals (4.6 percent of those tested) between 1985 and 1988.<sup>15</sup> This number does not include tests performed by other laboratories around the State. DHMH will be collecting data from hospital and commercial laboratories in order to have a more complete picture of the number of known seropositive individuals. From the currently available information, however, it would seem that the majority of HIV-infected persons in Maryland have not been tested. It is likely that many of those persons are unaware they are infected. They may be unknowingly spreading HIV, and may not be receiving appropriate health care. Some of these infected persons are intravenous drug users who are not receiving routine health care and will only be accessible when they seek episodic care, often for the complications of infection or violence associated with drug use. There are others who are readily accessible to primary care physicians either because they seek routine health care from their provider or because they are seeking care for pregnancy, for sexually transmitted diseases, or for drug addiction. The primary care physician can perform confidential HIV testing and counseling, using the consent form and procedures mandated by the recent AIDS Omnibus Law,<sup>16-19</sup> or they can refer patients to their city or county health department for confidential or anonymous testing. Both the public health and individual patient care will benefit from the widespread participation of physicians in case-finding.

*Management of Asymptomatic HIV Infection.* As noted above, a number of interventions are recommended for asymptomatic HIV-infected persons.<sup>8</sup> Assessment involves identifying other illnesses or infections associated with the patient's lifestyle (such as other sexually transmitted diseases), confirming the absence of signs of HIV disease on exam, and performing

routine laboratory tests (complete blood count and tests of hepatic and renal function), and a CD-4 (T-4, or helper cell) lymphocyte count. A skin test for tuberculosis infection and a serologic test for syphilis are routine. Certain other serological tests are often performed (e.g., hepatitis B, varicella, and toxoplasmosis), and screening for G-6-P-D deficiency may be useful.

Perhaps the most important intervention is counseling on avoidance of further exposure to, and spread of, HIV. Vaccination with the polyvalent pneumococcal vaccine (once) and influenza vaccine (yearly) should be provided. Prophylactic isoniazid (INH) for six to twelve months is indicated for those with previously untreated but inactive tuberculosis infection. Induration of 5 mm or more on a standard strength purified protein derivative is considered positive in HIV-infected patients. Patients with reactive syphilis serology should be assessed for latent neurosyphilis and treated aggressively. Persons who have neither circulating hepatitis B surface antigen nor hepatitis B antibody, yet may have future exposure to hepatitis B, may benefit from the hepatitis vaccine. Prior knowledge of a patient's toxoplasma antibody status is useful if the patient should later develop inflammatory mass lesions of the brain. It is useful to measure varicella antibody in persons without a personal history of chicken pox, because patients with severe immune deficiency and no varicella antibody may benefit from varicella hyperimmune globulin following an exposure to chicken pox.

The CD-4 (T-4) cell count should be determined at least every six months. Among HIV-infected gay men, the CD-4 count falls an average of 105 cells/cu mm annually.<sup>20</sup> Most asymptomatic persons will have CD-4 counts well above 200 cells/cu mm, although some persons will remain asymptomatic despite remarkably reduced CD-4 cell counts. Antiretroviral therapy with zidovudine is usually begun when the CD-4 count falls below 500 cells/cu mm.<sup>9,10</sup> This intervention delays the onset of AIDS. It is expected, but not proven, that this early use of AZT (azidothymidine) will also prolong survival. This use of zidovudine is licensed by the Food and Drug Administration (FDA) and is considered the standard of care by the National Institutes of Allergy and Infectious Diseases, but controversy remains.<sup>21-23</sup> The CDC recommends that prophylaxis for *Pneumocystis carinii* pneumonia be instituted in HIV-infected patients, even if asymptomatic, when the total CD-4 cell count falls below 200 cells/cu mm, using either an oral regimen such as trimethoprim-sulfamethoxazole or aerosolized pentamidine.<sup>11,24,25</sup>

In asymptomatic patients, referral to support groups, for drug treatment, for concrete social services or entitlements, or for legal services may be appropriate even though subspecialty consultation is often not necessary for clinical management.

*Management of Symptomatic HIV Infection.* As symptoms develop, the need for subspecialty consultation will vary with the experience of the primary care provider. Certain symptoms need no intervention and



are merely markers of HIV infection (e.g., persistent generalized lymphadenopathy), whereas advanced symptoms are markers of disease progression (e.g., oral candidiasis, oral hairy leukoplakia, unexplained weight loss with fever or diarrhea).<sup>26</sup> Some symptoms will be readily treatable by the primary care physician (e.g., oral candidiasis, seborrheic dermatitis, folliculitis), whereas management of other syndromes may benefit from subspecialty involvement (e.g., severe thrombocytopenia, psoriasis, renal insufficiency). Most persons with advanced symptoms will have CD-4 counts below 200 cells/cu mm.

Persons with either advanced symptoms or CD-4 counts below 200 cells/cu mm, or both, are at increased risk of developing an AIDS-defining opportunistic infection during the ensuing months, and should receive prophylaxis against *Pneumocystis carinii* pneumonia. Zidovudine has been proven to prolong survival in patients with these clinical and laboratory indications of impaired cellular immunity.<sup>27</sup>

**Management of AIDS.** Similarly, with the severe opportunistic diseases which define AIDS, the need for subspecialty involvement will vary. Some of these, such as *Salmonella* bacteremia, chronic herpes simplex lesions, or esophageal candidiasis, can be diagnosed, at least presumptively, and treated with the technologies directly available to primary care physicians. Others may require the participation of subspecialists for diagnostic procedures (e.g., bronchoscopy, gastrointestinal endoscopy, and other biopsy procedures) or therapy (e.g., respiratory failure and malignancies). Infectious disease consultation becomes important for the management of less common opportunistic infections, for persons with nondiagnostic workups, for those not responding to standard therapies, and for those for whom experimental therapy is considered.

### The Barriers to Care

Health care students, house staff, and practicing professionals have been surveyed about their attitudes regarding HIV infection. Although all of these surveys suffer from bias (i.e., those who return questionnaires are a self-selected group), they do provide information on how some providers feel about the HIV epidemic.

The student surveys with higher response rates probably suffer the least from selection bias. Among second- and third-year medical students in a low prevalence area, Kelly and colleagues found strong evidence of negative attitudes toward homosexuals and AIDS patients.<sup>28</sup> Another survey of senior medical students in a high prevalence area indicated that the majority (56 percent) would prefer to avoid care of HIV/AIDS patients, although a larger majority (63 percent) expected that between 1 and 15 percent of their clinical work would involve HIV/AIDS. Twenty-three percent of these students overestimated the risk of acquiring HIV through a needlestick exposure.<sup>29</sup>

Link et al surveyed 263 medical and pediatric house

officers in seven New York hospitals with large AIDS caseloads to assess their concern about occupational HIV transmission.<sup>30</sup> Forty-eight percent of the medical and 30 percent of the pediatric house officers reported a moderate to major degree of concern. Those who were in earlier stages of their training, those treating a larger number of AIDS patients, and those in Medicine programs had a higher level of concern. Twenty-five percent stated they would not treat AIDS patients if they had a choice. This study did not collect information on other barriers, but in this group of physicians with regular HIV contact, the risk of infection is an issue of major importance.

In a limited survey of members of the Maryland Academy of Family Physicians, 141 of 300 questionnaires have been returned and analyzed to date.<sup>31</sup> Sixty-one percent reported treating at least one HIV-infected patient, and 39 percent reported treating between ten and fifty patients. Thirty-seven percent reported treating at least one patient with severe disease. Ninety-two percent reported being willing to care for patients with asymptomatic infection, and 49 percent reported they would care for those with advanced disease. Of the fifty-eight percent who reported having concerns about treating HIV-infected patients, 69 percent reported that they had insufficient knowledge or training, 21 percent reported being concerned about acquiring HIV infection, and 12 percent reported being concerned that other patients in their practice might object.

The DHMH AIDS Administration conducted a mail survey of all physicians with an active Maryland license. Thirty-six percent of 13,668 physicians responded, and primary care specialties were slightly over-represented among the respondents. Forty-six percent stated that they were currently treating at least one HIV-infected patient, and 53 percent stated that they would accept a new HIV-infected patient into their practice. Physicians were asked if they would treat a patient already in their practice if the patient tested positive for HIV; 73 percent indicated they would continue to treat asymptomatic patients, 60 percent indicated they would continue to treat patients with mild symptoms, and 37 percent indicated they would continue to treat persons with advanced HIV disease.<sup>32</sup>

Discomfort among physicians in treating homosexuals has been noted in some studies, and may translate into a reluctance to treat people with HIV infection.<sup>33</sup> Although not documented, discomfort among physicians in treating intravenous drug users is likely to exist and have an effect on physicians' willingness to provide HIV care.

### Overcoming the Barriers

Public health and professional organizations alike have called on all physicians to provide care for HIV-infected persons. The American Medical Association and the American College of Physicians have done so,



as have the Institute of Medicine of the National Academy of Science and the Presidential Commission on the Human Immunodeficiency Virus Epidemic.<sup>34,37</sup> The Maryland AIDS Omnibus Law specifically forbids discrimination by licensed health practitioners against HIV-infected persons.<sup>16</sup>

Proactive efforts are necessary if these stated policies are to take effect. Many of the barriers can be overcome through education. The knowledge required to treat HIV-infected persons with mild or no symptoms is straightforward. The information required to manage many of the opportunistic infections is readily available in print and in continuing education conferences and courses. The Maryland AIDS Professional Education Center sponsors such courses, and can guide Maryland practitioners to appropriate conferences or reference material (301-328-8639).

An interaction with an HIV-infected person, at a course or clinical training session for instance, usually increases the comfort level of physicians who have not knowingly treated HIV-infected patients.

Many physicians are caring for HIV-infected persons without knowing it. Utilization of universal precautions can decrease the risk for physicians even as they accept known HIV-infected patients for care.<sup>38,39</sup> Education can play a role in countering discomfort in treating homosexuals and in equipping physicians with the skills to care for patients with the multiple problems caused by or associated with intravenous drug use.

Educating physicians in these areas will not be sufficient to allow the provision of services to all HIV-infected persons, nor will it stop the epidemic. Many issues of public policy must be addressed, such as expanded and improved options for treatment of drug use, increased availability of home care and chronic care services, and reimbursement for the care of uninsured or underinsured persons. Nevertheless, physician education, along with the education of students in the health field and other providers, is an indispensable aspect of confronting the epidemic.

## Conclusion

The CDC projects that 80,000 new cases of AIDS will be reported during 1992.<sup>5</sup> That represents the same number of cases which have been reported from the onset of the epidemic through 1988. The health professions and the public have only begun to experience the HIV epidemic. Through the first decade of the epidemic, a great deal has been learned about basic science and patient management. However, during the same period, a great deal of unnecessary suffering has been experienced, due in part to patients' difficulties in obtaining competent and compassionate care. Efforts are underway to develop improved therapies and perhaps a vaccine. In the meantime, primary care practitioners can equip themselves with knowledge to apply toward case-finding, patient management, and most importantly, prevention of further spread of the virus.

## References

1. Northfelt DW, Hayward RA, Shapiro MR. The acquired immunodeficiency syndrome is a primary care disease. *Ann Intern Med* 1988;109:773-5.
2. CDC. Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. *MMWR* 1987;36(Suppl S-1):1-15.
3. AIDS Administration - Division of AIDS Surveillance, Maryland Department of Health and Mental Hygiene. Maryland AIDS Update. October 1990.
4. CDC. HIV/AIDS Surveillance Report. October 1990.
5. CDC. AIDS and human immunodeficiency virus infection in the United States: 1988 update. *MMWR* 1989;38 (S-4):1-38.
6. Rogers AS. Personal communication.
7. Lifson A, Hessel N, Rutherford GW et al. The natural history of HIV infection in a cohort of homosexual and bisexual men: Clinical manifestations 1978-1989. (abstract TAO 32) V International Conference on AIDS. Montreal, Canada. 1989.
8. Cohn J and Cromwell G. Evaluation and management of early HIV infection. *State of Maryland Communicable Diseases Bulletin*. July 1990.
9. Volberding PA, Lagakos SW, Koch MA et al. Zidovudine in asymptomatic human immunodeficiency virus infection. *N Engl J Med* 1990;322:941-9.
10. Fischl MA, Reichman CP, Hansen N et al. The safety and efficacy of zidovudine (AZT) in the treatment of subjects with mildly symptomatic human immunodeficiency virus type 1 (HIV) infection. *Ann Intern Med* 1990;112:727-37.
11. CDC. Guidelines for prophylaxis against *pneumocystis carinii* pneumonia for persons infected with human immunodeficiency virus. *MMWR* 1989;38 (Suppl S-5):1-9.
12. Koenig S and Fauci AS. AIDS: Immunopathogenesis and immune response to the human immunodeficiency virus. In DeVita VT Jr, Hellman S, Rosenberg SA (eds), *AIDS: Etiology, Diagnosis, Treatment and Prevention*, 2nd ed. Philadelphia: J.B. Lippincott Co., 1988:61-78.
13. Mason JO, Noble GR, Lindsey BK et al. Current CDC efforts to prevent and control human immunodeficiency virus infection and AIDS in the United States through information and education. *Public Health Rep* 1988;103:255-60.
14. Richland JH. Role of state health agencies in responding to AIDS. *Public Health Rep* 1988;103:267-72.
15. Harper J. Data from counseling and testing sites in Maryland, 1988. In: *HIV/AIDS in Maryland 1988*. Baltimore: Center for AIDS Epidemiology, AIDS Administration, Department of Health and Mental Hygiene, 1988.
16. Governor signs AIDS omnibus bill. Baltimore: State of Maryland Communicable Diseases Bulletin, Department of Health and Mental Hygiene, June 1989.
17. Kaminski MA and Hartmann PM. HIV testing: Issues for the family physician. *Am Fam Pract* 1988;38(1):117-22.
18. CDC. Public Health Service guidelines for counseling and antibody testing to prevent HIV infection and AIDS. *MMWR* 1987;36:509-15.
19. Drotman DP. Earlier diagnosis of human immunodeficiency virus (HIV) infection and more counseling. *Ann Intern Med* 1989;110:680-1.
20. Munoz A, Carey V, Saah H et al. Predictors of decline in CD-4 lymphocytes in a cohort of homosexual men infected with human immunodeficiency virus. *J Acq Imm Def Syn* 1988;1:396-404.
21. Friedland GH. Early treatment for HIV. The time has come. *N Engl J Med* 1990;322:1001-2.
22. Zidovudine for symptomless HIV infection. *Lancet* 1990;1:821-2.
23. Ruddy J, Schecter M, Montaner JSG. Zidovudine for early human immunodeficiency virus infection: Who, when and how? *Ann Intern Med* 1990;112:721-2.
24. Fischl MA, Dickinson GM, LaVoie L. Safety and efficacy of sulfamethoxazole and trimethoprim chemoprophylaxis for *Pneumocystis carinii* pneumonia in AIDS. *JAMA* 1988;259:1185-9.
25. Leoung GS, Fergal DW, Montgomery AB et al. Aerosolized pentamidine for prophylaxis against *Pneumocystis carinii* pneumonia: The San Francisco community prophylaxis trial. *N Engl J Med* 1990;323:769-75.



26. Moss AR, Bacchetti P, Osmond D et al. Seropositivity and the development of AIDS or AIDS-related condition: Three-year follow-up of the San Francisco General Hospital cohort. *Br Med J* 1988;296:745-50.

27. Fischl MA, Richman DD, Grieso MH et al. The efficacy of azidothymidine (AZT) in the treatment of patients with AIDS and AIDS-related complex. *N Engl J Med* 1987;317:185-91.

28. Kelly JA, St. Lawrence JS, Smith S, Hood HV, Cook DJ. Medical students' attitudes toward AIDS and homosexual patients. *J Med Educ* 1987;62:549-56.

29. Recruitment of House Officers, In: *Acquired Immunodeficiency Syndrome and The State University of New York Health Science Center at Brooklyn*, 1988.

30. Link RN, Feingold AR, Charap MH, Freeman K, Shelov SP. Concerns of medical and pediatric house officers about acquiring AIDS from their patients. *Am J Public Health* 1988;78(4):455-59.

31. Hersh E, Cromwell G, Ferentz KS. Family physicians' experiences with attitudes towards HIV-positive patients. (abstract) Austin, Texas: North American Primary Care Research Group. 1989.

32. Bur S and Fredman L. The Maryland Physicians' Survey: Regarding AIDS and human immunodeficiency virus (HIV) related disease, 1989. Preliminary summary and tabulated results, January 1990. *AIDS Administration, DHMH*.

33. Mathews WC, Booth MW, Turner JD, Kessler L. Physicians' attitudes toward homosexuality - survey of a California county medical society. *West J Med* 1986;144:106-10.

34. Hendee WR, Rapoza NP, Rinaldi RC, Schwartz MR. The American Medical Association's program on human immunodeficiency virus infection and acquired immunodeficiency syndrome. (editorial) *JAMA* 1987;258:1519-20.

35. Health and Public Policy Committee, American College of Physicians and Infectious Diseases Society of America: The acquired immunodeficiency syndrome (AIDS) and infection with the human immunodeficiency virus (HIV). *Ann Intern Med* 1988;108:460-9.

36. Care of Persons Infected with HIV. In: *Institute of Medicine-National Academy of Sciences: Confronting AIDS*, Update 1988. Washington DC: National Academy Press, 1988:93-122.

37. Watkins JD et al. Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic. U.S. Government Printing Office, 1988:23-30.

38. CDC. Recommendations for preventing transmission of infection with human lymphotropic virus type III/lymphadenopathy associated virus in the workplace. *MMWR* 1985;34:681-95.

39. CDC. Recommendations for preventing transmission of infection with human T-lymphotropic virus type III/lymphadenopathy associated virus during invasive procedures. *MMWR* 1986;35:221-3.

## Annotated Bibliography on HIV Infection and AIDS for the Primary Care Practitioner

### *HIV Testing and Counseling*

CDC. Public health service guidelines for counseling and antibody testing to prevent HIV infection and AIDS. *MMWR* 1987;36:509-15. Specific indications and methods for testing and counseling.

Drotman DP: Earlier Diagnosis of human immunodeficiency virus (HIV) infection and more counseling. *Ann Intern Med* 1989;110:680-1. Emphasizes utility of testing for public health and for patient care.

Governor signs AIDS omnibus bill. *Communicable Diseases*

*Bulletin, DHMH*, 201 W. Preston St., Baltimore, MD 21201. June 1989. A standardized consent form will be required for HIV testing in Maryland as of November 1, 1989.

### *Review Articles on Medical Management*

AIDS Clinical Care. Medical Publishing Group of the Massachusetts Medical Society. P.O. Box 9085, Waltham, MA. Monthly periodical on medical management for primary care practitioners.

Communicable Diseases Bulletin, DHMH, 201 W. Preston St., Baltimore, MD. Monthly reviews of prevention and clinical management, and epidemiologic and legal aspects of the HIV epidemic.

CDC. Recommendations for prophylaxis against *Pneumocystis carinii* pneumonia for persons infected with human immunodeficiency virus. *MMWR* 1989;38(Suppl S-5):1-9. Recommends indications and dosage for *Pneumocystis* prophylaxis regimens in the context of management of asymptomatic HIV-infected persons.

Glatt AE, Chirgwin K, Landesman SH. Treatment of infections associated with human immunodeficiency virus. *N Engl J Med* 1988;318:1439-1448. Concise review of the major opportunistic infections, with extensive references.

Hollander H. Practical management of common AIDS-related medical problems. *West J Med* 1987;146:237-40. Very brief, symptom-oriented approach.

### *Prevention and Management of Occupational Exposure to HIV*

CDC. Recommendations for preventing transmission of infection with human T-lymphotropic virus type III/lymphadenopathy-associated virus in the workplace. *MMWR* 1985;34:681-95.

CDC. Recommendations for preventing transmission of infection with human T-lymphotropic virus type III/lymphadenopathy-associated virus during invasive procedures. *MMWR* 1986;35:221-3.

CDC. Public Health Service statement on management of occupational exposure to human immunodeficiency virus, including consideration regarding zidovudine postexposure use. *MMWR* 1990;39(Supplement RR-1):1-14.

### *Textbooks and Manuals*

Cohn J, (ed). *Manual of HIV/AIDS Care*. Maryland AIDS Professional Education Center; Baltimore, MD, 1990. Treatment protocols for the medical management of HIV infection and related conditions.

DeVita VT Jr, Hellman S, Rosenberg SA (eds). *AIDS: Etiology, Diagnosis, Treatment and Prevention*, 2nd ed. Philadelphia: J.B. Lippincott Co., 1988. Sophisticated review of basic science, clinical management and public health issues.

Sande MA and Volberding PA (eds). *The Medical Management of AIDS*, 2nd edition. Philadelphia: W.B. Saunders, 1989. Practical review of management from the AIDS program of San Francisco General Hospital.

Sande MA and Volberding PA (eds). *Medical Management of AIDS*. *Infect Dis Clinics N Am* 1988;2:285-555. Detailed review emphasizing clinical management, with separate chapters devoted to asymptomatic and symptomatic HIV infection and the opportunistic diseases of AIDS.

Volberding P and Jacobson MA. *AIDS Clinical Review* 1989. New York: Marcel Dekker, 1989. Provides updates of selected clinically relevant topics.

**What do C. Everett Koop MD, Antonia Novello MD, Marilyn Quayle and you have in common?**

**A date at the Annual Meeting at College Park on May 8-11.**

See pages 222 and 223 for more info....



---

# HIV-Associated Nephropathy: Report of a Case and Review of the Literature

---

John Josselson MD

---

*Dr. Josselson is Associate Professor of Medicine, Division of Nephrology, Department of Medicine, University of Maryland Hospital, Baltimore, MD. Reprints: John Josselson MD, Division of Nephrology, University of Maryland Hospital, 22 S. Greene St., Baltimore, MD 21201.*

---

*A case of HIV-associated nephropathy in a thirty-three-year-old black, homosexual male is presented to illustrate the syndrome and serve as a focus for a review of the literature.*

---

**T**he spectrum of renal disease in seropositive human immunodeficiency virus (HIV) carriers and patients with the acquired immunodeficiency syndrome (AIDS) has received increasing attention over the past few years since the initial report by Rao et al<sup>1</sup> in 1984 of a specific form of focal and segmental glomerulosclerosis (FSGN) with an unusually poor prognosis occurring in several patients with the syndrome. The issue of whether HIV-associated nephropathy is indeed a distinct entity has been a recent subject of controversy. The presence of viral-like tubuloreticular inclusion (TRI) particles in the glomeruli of some patients has been suggested as a possible marker of this entity. We report here one such patient, with a review of the literature.

## Case Report

A thirty-three-year-old black male homosexual was admitted to the hospital with a three-week history of nausea, vomiting, pleuritic chest pain and cough with rusty sputum, anorexia, and a forty-pound weight loss over the preceding four months. Three years before, at the time of breast implantation surgery, his serum creatinine was 1.2 mg/dl, and no proteinuria was reported. He denied any prior history of renal disease, hepatitis, venereal disease, or illicit intravenous (IV) drug use, but admitted to occasional use of marijuana and cocaine.

Physical examination revealed a 5'11", 186 lb male, coughing but in no acute distress. Pertinent findings included a blood pressure of 130/90 mm mercury, pulse of 96, respirations twenty per minute, temperature 99.8° F., poor dentition with gingivitis, and decreased breath sounds at both lung bases with scattered inspiratory wheezes. Breast implants were present, no penile lesions were seen, and there was no adenopathy.

Admission laboratory data revealed a hemoglobin (Hgb) of 10.7 gm/dl, a white blood count (WBC) of 4,300, and 3+ proteinuria. The blood urea nitrogen (BUN) was 15 mg/dl and calcium was 7.7 mg/dl. Admission sputum cultures were negative. The chest x-ray revealed a patchy infiltrate in the left lower lung field. The purified

protein derivative (PPD) and trichophyton skin tests were negative. HIV antibodies were positive by enzyme-linked immunosorbent assay (ELISA) and confirmed by Western blot. Antibodies to Hepatitis A and B were present, the fluorescent treponemal antibody-absorption test for syphilis (FTA-ABS) was positive and other immunologic studies were normal or negative. Viral titers, including cytomegalovirus (CMV) and herpes, were insignificant. Lymphocyte cell surface marker studies performed on day fourteen revealed a CD4/CD8 of 0.20.

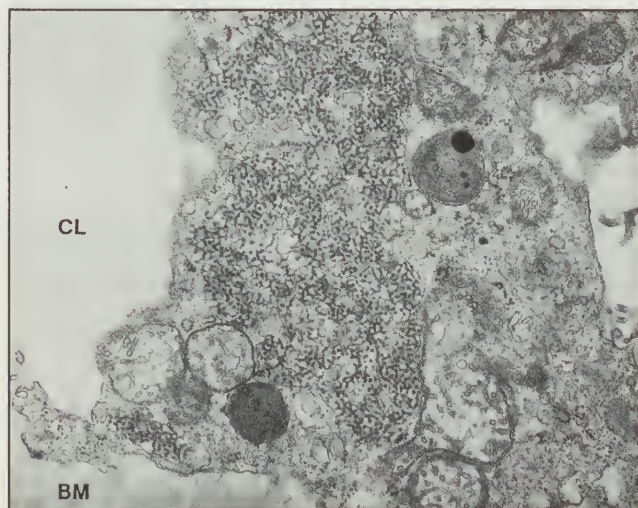
The patient was begun on intravenous antibiotics, however a low grade fever persisted. Chest x-ray on day seven revealed progression to a bilateral diffuse interstitial infiltrate. On day nine, antibiotics were discontinued and the patient underwent a lung biopsy. At that time his BUN was 29 mg/dl and his creatinine 2.8 mg/dl. A 24-hour urine contained 3.2 grams of albumin. The lung biopsy revealed numerous intra-alveolar organisms typical of *Pneumocystis carinii*. On day ten the patient was begun on trimethoprim-sulfisoxazole intravenously; an intermittent low-grade fever persisted and renal function declined. By day twenty-five, the lung infiltrates had cleared.

A renal biopsy was performed on day twenty-two and revealed mild mesangial hypercellularity and focal global glomerulosclerosis. Thrombi were present in approximately one-third of the examined glomeruli. Interstitial fibrosis and mild mononuclear inflammation were also seen. Immunofluorescence showed 2+ granular mesangial immunoglobulin M (IgM) and C3.

Electron microscopy showed almost complete simplification of epithelial cell foot processes. No immune complex deposition was seen, however very large numbers of TRI particles were seen in glomerular endothelial cells (Figure).

### Discussion

At the onset of the emergence of AIDS as a distinct clinical entity, there was little apparent evidence of



**Figure.** Tubuloreticular inclusions in a glomerular endothelial cell. CL = Capillary Lumen. BM = Basement Membrane.

intrinsic renal involvement. Several large autopsy series<sup>2-7</sup> were noteworthy for the absence of glomerular disease, and in a report from the National Institutes of Health, Balow<sup>8</sup> noted the striking infrequency of severe glomerular changes in a study of fifty patients with AIDS, most of whom were homosexual males and only two of whom were known to have intravenous drug abuse (IVDA) as a risk factor.

In late 1983 and 1984, the first series of AIDS patients with renal pathology were reported from Brooklyn, Manhattan, and Miami.<sup>1,9-12</sup> The study by Rao et al<sup>1</sup> describing eleven patients with proteinuria and/or azotemia, ten of whom had the lesion of FSGN on biopsy and rapid declines in renal function, was the first to suggest a pattern of renal involvement which might be considered to be an AIDS-associated nephropathy. The issue was clouded by the observation that five of their patients were known to have a history of IVDA, itself a risk factor for FSGN,<sup>13</sup> and by two other early reports published by Gardenschwartz<sup>11</sup> and Pardo,<sup>12</sup> who observed a heterogeneity of renal and glomerular lesions in which FSGN was inconstantly seen.

Over time, a clearer picture of the extent of renal involvement with HIV, ARC (AIDS-related complex), and AIDS began to evolve. Rao and colleagues reported a 10.4 percent incidence of renal abnormalities in seventy-five AIDS patients treated in Brooklyn.<sup>14</sup> Twenty-nine percent (23 patients) had clinically diagnosed acute renal failure from AIDS-related complications and its treatment; the remainder (fifty-five patients) had nephrotic range proteinuria with or without azotemia, and half of these had FSGN confirmed by renal biopsy or at autopsy. Bourgoignie, in describing the clinical experience in Miami over five years from 1982 to 1987,<sup>15</sup> reported that renal consultation was obtained in 6.1 percent of 1,635 new patients admitted with ARC/AIDS, and that over the period studied, the percent of patients seen in consultation remained constant despite dramatic increases in the number of new AIDS patients each year. Nephrotic range proteinuria and/or severe azotemia were present in 91 percent of a hundred patients consulted, and of twenty-five patients undergoing renal biopsy, all had FSGN. Another prospective study from the same program,<sup>16</sup> in which renal biopsy tissue or autopsy tissue from 159 patients was examined, revealed a diagnosis of FSGN in thirty-one, and diffuse mesangial hyperplasia in another eleven. Eighty-seven percent of the patients with FSGN were black (including Haitians), 61 percent were male, and 45 percent were at risk from IVDA. In contrast, 54 percent of those patients with mesangial hyperplasia were black, 82 percent were male, and 55 percent were homosexual, with only one intravenous drug abuser.

Contrary to the collective reports from New York and Miami which contain the largest concentrations of HIV/ARC/AIDS patients in the eastern United States, reports from the west coast<sup>17,18</sup> note a lack of FSGN and the AIDS-associated nephropathy described by Rao<sup>1,14,19</sup> and others.<sup>12,15,16,20-23</sup>



It is clear, in retrospect, that patients having intrinsic renal involvement with HIV/ARC/AIDS (excluding that caused by pre-renal factors or acute renal failure) can be categorized on the basis of demographic data into those patients with HIV-associated nephropathy (HIVAN, replacing the term AIDS-associated nephropathy, AAN),<sup>19,24</sup> and those with a heterogeneous collection of glomerular lesions including mesangial hypercellularity<sup>16</sup> and minimal glomerular change.<sup>17,25</sup> Those with HIVAN are more likely to be black (including Haitian), male, heterosexual, and intravenous drug abusers; those with "other" lesions are more likely to be white, male, and homosexual.<sup>16,19</sup> While IVDA is a strong risk factor for HIVAN, 50 percent of patients in several reported series have no history of IVDA, and reports of FSGN in infants and children with AIDS<sup>16,26</sup> support the hypothesis that FSGN seen in the setting of HIV infections can be distinguished from FSGN seen in IVDA. Additionally, several studies now demonstrate that FSGN can be the initial manifestation of an HIV infection in otherwise asymptomatic carriers.<sup>19,24</sup>

Compelling clinical and pathological data now exist which strengthen the demographic findings presented above and support the argument for a distinct HIV-associated nephropathy. FSGN in the setting of IVDA has been well described.<sup>13,27-30</sup> This syndrome is characterized by the development of proteinuria and hypertension with a gradual but stable progression to end stage renal disease (ESRD) over four years in patients with a creatinine clearance exceeding 60 ml/min at diagnosis,<sup>1</sup> and a progressive loss of renal mass leading to small, contracted kidneys. Renal replacement therapy with dialysis or transplantation, permits long-term survival in those patients who can abstain from further addictive behaviors. FSGN in the setting of ARC/AIDS behaves quite differently clinically, whether or not the patient is a drug abuser. While nephrotic range proteinuria is the rule, hypertension is notably absent,<sup>23,31</sup> kidneys are enlarged on ultrasound<sup>32</sup> and at autopsy,<sup>16</sup> and progression to ESRD is rapid over weeks to a few months,<sup>1,20-21,23</sup> followed by early death, whether or not dialysis is employed.

The pathologic picture of FSGN, whether idiopathic<sup>33</sup> or associated with IVDA<sup>13,27-30</sup> has been well characterized. While the initial reports of HIVAN emphasized the similarities of the FSGN in these three distinct settings, a number of morphologic features associated with HIVAN now appear to distinguish it as a distinct entity. The most striking observations are an increase in mesangial hypercellularity,<sup>34</sup> tubular microcystic dilatation,<sup>34-35</sup> and the presence of TRI in glomerular endothelial cells (Figure), and interstitial cell cytoplasm<sup>34-37</sup> analogous to "viral-like" particles initially described in renal tissue from patients with systemic lupus erythematosus<sup>38</sup> and the "vesicular rosette" originally described in lymphoid tissue of AIDS patients.<sup>39</sup> The presence of TRI in large quantities suggests the role of a viral mechanism for HIVAN,<sup>34,36-37</sup> and there are some data to support this

hypothesis. Cohen was able to identify HIV dioxynucleic acid (DNA) in glomerular and renal tubular epithelial cells in HIVAN,<sup>40</sup> and Rao<sup>19</sup> recently reported the presence of p24 antigen in the immune complexes of one homosexual male with an HIV infection and membranous glomerulonephritis. Although other studies have failed thus far to identify viral antigens in glomeruli,<sup>41</sup> these reports raise the possibility that HIV may be directly glomerulo- and tubulo-toxic.<sup>42</sup> The recent development of an animal model of HIVAN<sup>43-44</sup> may shed light on this hypothesis.

The epidemiologic, clinical, and pathologic evidence summarized in this brief review unequivocally support the existence of HIV-associated nephropathy. The patient presented here well illustrates the unique features of this entity. As the incidence of HIV infections in intravenous drug abusers and their sexual contacts continue to increase in Maryland, it may be anticipated that this syndrome will become much more visible.

## References

1. Rao TKS, Filipone EJ, Nicastri AD, Landesman SH, Frank E, Chen CK, Friedman EA. Associated focal and segmental glomerulosclerosis in the acquired immunodeficiency syndrome. *N Engl J Med* 1984;310:669-73.
2. Guarda LA, Luna MA, Smith JL. Acquired immune deficiency syndrome. Postmortem findings. *Am J Clin Pathol* 1984;81:549-57.
3. Hui AN, Koss MN, Meyer PR. Necropsy findings in acquired immune deficiency syndrome: A comparison of premortem diagnoses with postmortem findings. *Hum Pathol* 1984;15:670-76.
4. Mobley K, Rotterdam HW, Lerner CW, Tapper ML. Autopsy findings in the acquired immune deficiency syndrome. *Pathol Annu* 1985;20:45-65.
5. Niedt GW, Schinella RA. Acquired immunodeficiency syndrome. Clinicopathologic study of 56 autopsies. *Arch Pathol Lab Med* 1985;109:727-34.
6. Reichert CM, O'Leary TJ, Levens DL. Autopsy pathology in the acquired immune deficiency syndrome. *Am J Physiol* 1983;112:357-82.
7. Welch K, Finkbeiner W, Alpers CE, Blumenfeld W, Davis RL, Smuckler EA, Beckstead JH. Autopsy findings in the acquired immune deficiency syndrome. *JAMA* 1984; 252:1152-9.
8. Balow JE, Macher AM, Rook AH. Paucity of glomerular disease in acquired immunodeficiency syndrome. (Abstract) *Kidney Int* 1986;29:178.
9. Rao TKS, Filipone EJ, Nicastri AD, Landesman SH, Frank E, Chen CK, Friedman EA. Acquired immunodeficiency syndrome (AIDS)-associated nephropathy; focal and segmental glomerulosclerosis: A new entity. (Abstract) *Kidney Int* 1984;25:174.
10. Gardenschwartz MH, Lerner CW, Seligson GR, Zabetakis PM, Rotterdam H, Tapper ML, Michelis MF, Bruno MS. Renal disease in patients with AIDS. (Abstract) *Kidney Int* 1984;25:165.
11. Gardenschwartz MH, Lerner CW, Seligson GR, Zabetakis PM, Rotterdam H, Tapper ML, Michelis MF, Bruno MS. Renal disease in patients with AIDS: A clinicopathologic study. *Clin Nephrol* 21:197-204, 1984.
12. Pardo V, Aldana M, Colton RM, Fischl MA, Jaffe D, Moskowitz L, Hensley GT, Bourgoignie JJ. Glomerular lesions in the acquired immunodeficiency syndrome. *Ann Intern Med* 1984;101:429-34.
13. Rao TKS, Nicastri AD, Friedman EA. Natural history of heroin-associated nephropathy. *N Engl J Med* 1974;290:19-23.
14. Rao TKS, Friedman EA, Nicastri AD. The types of renal disease in the acquired immunodeficiency syndrome. *N Engl J Med* 1987;316:1062-8.
15. Bourgoignie JJ, Meneses R, Ortiz C, Jaffe D, Pardo V. The clinical spectrum of renal disease associated with human immunodeficiency virus. *Am J Kidney Dis* 1988;12:131-7.
16. Pardo V, Meneses R, Ossa L, Jaffe DJ, Strauss J, Roth D,

Bourgoignie JJ. AIDS-related glomerulopathy: Occurrence in specific risk groups. *Kidney Int* 1987;31:1167-73.

17. Mazbar S, Humphreys MH. AIDS-associated nephropathy is not seen at San Francisco General Hospital. (Abstract) *Kidney Int* 1988;33:202.

18. Humphreys MH. Human immunodeficiency virus-associated nephropathy: East is east and west is west? *Arch Intern Med* 1990;150:253-5.

19. Rao TKS, Friedman EA. AIDS (HIV)-associated nephropathy: Does it exist? An in-depth review. *Am J Nephrol* 1989;9:441-53.

20. Carbone L, D'Agati V, Cheng J-T, Appel CB. Course and prognosis of human immunodeficiency virus-associated nephropathy. *Am J Med* 1989;87:389-95.

21. Lings C, Gallo GR, Schacht RG, Sidhu G, Baldwin DS. Rapid renal failure in AIDS-associated focal glomerulosclerosis. *Arch Intern Med* 1990;150:287-92.

22. Dosquet P, Haddoum F, Viron B, Mougenot B, Mayaud C, Ronco P, Mignon F. Focal and segmental glomerulosclerosis (FSG) during acquired immunodeficiency syndrome (AIDS): Two observations. (Abstract) *Kidney Int* 1988;33:1041-2.

23. Provenzano R, Kupin W, Santiago GC. Renal involvement in the acquired immunodeficiency syndrome: Presentation, clinical course and therapy. *Henry Ford Hosp Med J* 1987;35:38-41.

24. Rao TKS, Mallis LR, Friedman EA. Nephropathy as the initial manifestation of human immunodeficiency virus (HIV) disease. (Abstract) *Kidney Int* 1988;33:205.

25. Humphreys HM, Schoenfeld PY. Renal complications in patients with the acquired immunodeficiency syndrome (AIDS). *Am J Nephrol* 1987;7:1-7.

26. Rousseau E, Russo P, Lapointe N, O'Regan S. Renal complications of acquired immunodeficiency syndrome in children. *Am J Kidney Dis* 1988;11:48-50.

27. Eknoyan G, Gyorkey F, Dichoso C, Hyde SE, Gyorkey P, Suki WN, Martinez-Maldonado M. Renal involvement in drug abuse. *Arch Intern Med* 1973;132:801-6.

28. Treser G, Cherubin C, Lonergan ET, Yoshizawa N, Viswanathan V, Tannenbaum AM, Pompa D, Lange K. Renal lesions in narcotic addicts. *Am J Med* 1974;57:687-94.

29. Llach F, Descocudres C, Massry SG. Heroin-associated nephropathy: Clinical and histological studies in 19 patients. *Clin Nephrol* 1979;11:7-12.

30. Cunningham EE, Brentjens JR, Zielezny MA, Andres GA, Venuto RC. Heroin nephropathy: A clinicopathologic and epidemiologic study. *Am J Med* 1980;68:47-53.

31. Soni A, Agarwal A, Chander P, Yoo J, Singal D, Salomon N, Robinson B, Treser G. Evidence for an HIV-related nephropathy: a clinico-pathologic study. *Clin Nephrol* 1989;31:12-17.

32. Schaffer RM, Schwartz GE, Becker JA, Rao TKS, Shih YH. Renal ultrasound in acquired immune deficiency syndrome. *Radiology* 1984;153:511-3.

33. Goldsbor RC, Sweet J, Cotran RS. Focal segmental glomerulosclerosis. *Annu Rev Med* 1984;35:429-49.

34. Chander P, Soni A, Suri A, Bhaqwat R, Yoo J, Treser G. Renal ultrastructural markers in AIDS-associated nephropathy. *Am J Pathol* 1987;126:513-26.

35. D'Agati V, Suh JI, Carbone L, Cheng JJ, Appel G. Pathology of HIV-associated nephropathy: A detailed morphologic and comparative study. *Kidney Int* 1989;35:1358-70.

36. Chander P, Agarwal A, Soni A, Kim K, Treser G. Renal cytomembranous inclusions in idiopathic renal disease as predictive markers for the acquired immunodeficiency syndrome. *Hum Pathol* 1988;19:1060-4.

37. Alpers CE, Harawi S, Rennke HG. Focal glomerulosclerosis with tubuloreticular inclusions: Possible predictive value for acquired immunodeficiency syndrome (AIDS). *Am J Kidney Dis* 1988;12:240-2.

38. Gyorkey F, Min KW, Sincorics JG, Gyorkey P. Systemic lupus erythematosus and myxovirus. *N Engl J Med* 1969;280:333.

39. Ewing, Jr EP, Spira JJ, Chandler FW, Callaway CS, Brynes RK, Chan WE. Unusual cytoplasmic body in lymphoid cells of homosexual men with unexplained lymphadenopathy. *N Engl J Med* 1983;308:819-22.

40. Cohen AH, Sun NCJ, Shapshak P, Imagawa DT. Demonstration of human immunodeficiency virus in renal epithelium in HIV-associated nephropathy. *Mod Pathol* 1989;2:125-8.

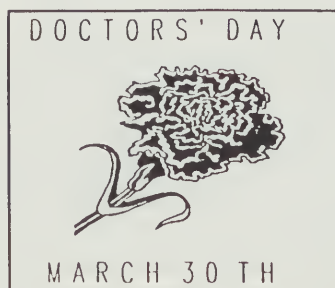
41. Cohen AH, Sun NCS, Shapshak P, Imagawa D. Immune complex glomerulonephritis in HIV-infected patients: Lack of HIV antigens in immune complexes. (Abstract) *Lab Invest* 1989;60:18A.

42. Cohen AH, Sun NCJ, Shapshak P. HIV associated nephropathy: Direct viral infection of kidneys? (Abstract) *Mod Pathol* 1988;1:19A.

43. Alpers CE, Tsai C-C, Thouless M, Kuellar L, Morton WR. Focal and segmental glomerulosclerosis (FSG) in primates infected with simian immunodeficiency virus (SIV). (Abstract) *Lab Invest* 1988;58:3A.

44. Alpers CE, Bastein GB. Sclerosing glomerulopathy in rhesus monkeys with simian AIDS. (Abstract) *Kidney Int* 1989;35:339. ■

To show appreciation for the invaluable contribution physicians make in caring for the sick, advancing medical knowledge, and promoting improved public health, March 30th has been declared **National Doctors' Day**.



## MARYLAND KIDNEY STONE CENTER

- Extracorporeal Shock Wave Lithotripsy
  - New Physician Incentives
  - Convenient Patient Scheduling
  - On-site Pre-Admission Testing
  - Convenient Location
- For Further Information Contact  
**ALAN WEISMAN**  
ADMINISTRATOR  
**301-377-2622**

6115 Falls Road • Baltimore, Maryland 21209

A joint venture of five participating hospitals:  
Greater Baltimore Medical Center, Sinai Hospital of Baltimore,  
Union Memorial Hospital, Johns Hopkins Medical Institutions and the  
University of Maryland Medical System.



---

# The Human Thyrotropin-releasing Hormone Gene: An Application of Molecular Biology to Contemporary Endocrinology Research

John F. Wilber MD

*Dr. Wilber is Professor of Medicine and Head of the Endocrinology and Metabolism Division, Department of Medicine, University of Maryland School of Medicine, Baltimore. Reprints: John Wilber MD, Endocrinology and Metabolism Division, University of Maryland Hospital, 22 South Greene St., Baltimore, MD 21201.*

---

*Knowledge concerning the structure of the human gene preproTRH makes possible studies of its regulation by hormones and other factors such as cyclic adenosine monophosphate (AMP).*

---

What keeps us eternally young in Endocrinology is our ever-changing concept of disease. This has been well-dramatized by the history of the University of Maryland's Endocrinology and Metabolism Division. The first Division head appointed in 1956, Dr. Thomas B. Connor, established a reputation as an outstanding clinical investigator in the areas of calcium metabolism and metabolic bone disease, as well as by his innovative contributions in renovascular hypertension. Dr. Connor was the first investigator to postulate the probable role of tumor hormonal factors mediating the hypercalcemia of malignancy.<sup>1</sup>

Since that time, a major revolution in the biological sciences has occurred through developments in molecular biology and recombinant deoxyribonucleic acid (DNA) technology. This new biology, begun in the 1960s with the discovery of DNA structure and the genetic code for amino acids, has been widely applied in all domains of Endocrinology. This article focuses on a specific application of this new molecular biology to an area of human neuroendocrinology being carried out by the author and his co-workers. The research program centers around characterization, expression, and regulation of the gene for human thyrotropin-releasing hormone (TRH), the major regulator of pituitary thyrotropin (TSH) synthesis and secretion. Both thyroidal growth and the secretion of thyroxine ( $T_4$ ) and triiodothyronine ( $T_3$ ) from the human thyroid, in turn, are stimulated by TSH.

In 1969, TRH was the first hypothalamic hormone to be isolated.<sup>2</sup> At first, TRH was thought to be localized only in the hypothalamus and to function exclusively as a regulator of pituitary TSH secretion. Our group and others, however, have demonstrated that TRH is also present throughout the entire brain including the spinal cord, and in the pancreas.<sup>3</sup> In these locations, TRH subserves new, non-endocrine functions as a central nervous system neurotransmitter and neuromodulator, and in the pancreatic islets, as a precursor for a dipeptide inhibitor of insulin and glucagon secretion. The secretion of pituitary TSH

is regulated not only by the inhibition by  $T_3$  of TRH stimulation of pituitary TSH release, but also by inhibiting TRH gene transcription itself in the brain's hypothalamus.<sup>4</sup> We decided that it was crucial to isolate the human gene encoding the precursor protein containing the TRH molecule in order to elucidate how thyroid hormones actually regulate TRH gene expression. Such studies of TRH gene regulation would provide a model for new insights into how thyroid hormone acts at the level of the gene, and will also help to further understanding as to how other hormones act at the molecular level; this is because estrogens, progesterone, aldosterone, testosterone, vitamin D, and retinoic acid, like thyroid hormones, act by attaching to a structurally-related superfamily of intracellular hormone-binding proteins, which then attach to DNA receptors to enhance or restrain gene expression.<sup>5</sup>

Our group has successfully cloned and characterized the gene for human preproTRH and the corresponding complementary DNA (cDNA) in the hypothalamus.<sup>6</sup> The human gene was isolated from a human lung fibroblast genomic library after screening two million plaques with a  $^{32}P$ -probe specific for the homologous rat preproTRH gene, chosen because it encoded gene sequences likely to be similar to those in the human gene. A single DNA clone, 15 kilobases (Kb) in size, was identified and isolated. A smaller fragment within this clone (4.8 Kb), containing the entire human TRH gene, was then subcloned into a plasmid vector for DNA sequencing.<sup>6</sup> It can be seen in the lower restriction endonuclease map of the TRH gene (Figure 1) and in the upper schematic diagram of the cDNA corresponding to the exons of the human TRH gene, that there are three exons with two intervening introns of 1050 and 650 bp, respectively, in this human gene. It is remarkable that the human gene is a multicopy gene, containing six identical copies of TRH coding sequences within the third exon, shown by the black bars. This has fascinating implications because during the proteolytic processing of the human preproTRH precursor protein, not only will six TRH molecules be generated, but seven intervening peptides will also be formed with predicted functions as neurotransmitters and neuro-modulators in the central nervous system, and possibly in other extraneural locations as yet unknown.

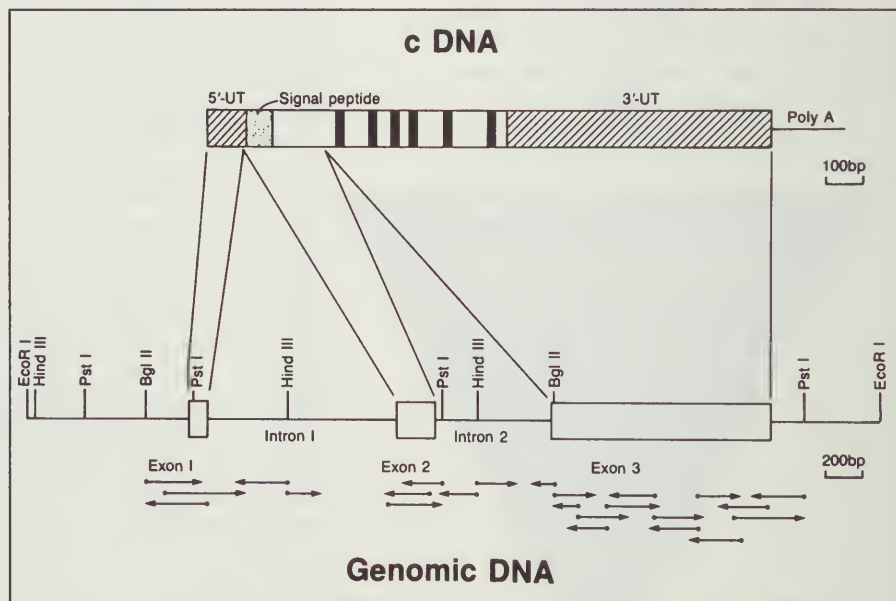
The human gene for TRH exhibits 73.3 percent and 59.5 percent homology with the rat TRH gene at the nucleic acid and protein levels, respectively. Studies of potential

homology with other protein hormone genes have revealed that the human preproTRH gene enjoys 52 percent homology with the human chromogranin A gene, implying that these two genes have originated from a common ancestral gene during evolution. This is of interest as chromogranin A is present in many endocrine tissues including the pituitary gland, the thyroid gland, the hypothalamus, the adrenal medulla, the pancreas, medullary carcinoma cells, and in hormone-producing small cell carcinomas of the lung.

Recently, we have demonstrated that thyroid hormones reduce TRH messenger ribonucleic acid (RNA) levels in a selected region of the rat hypothalamus, implying that there is a thyroid hormone inhibitory regulatory element located in the TRH gene.

Our group has searched carefully in the 5' flanking region of the human TRH gene for a potential thyroid receptor element (TRE), and found that an eight-base sequence, GCCAGTGC (at bp -183 to -190 upstream from the start of gene transcription), is identical to sequences in both the human and rat TSH genes which are also under inhibitory control by thyroid hormones. The conservation of these identical sequences in three different hormone genes, all inhibited by  $T_4$  and  $T_3$ , strongly suggest they are important for inhibitory regulation by thyroid hormones, through the specific intracellular  $T_3$  binding proteins (hErbA proteins) that attach to these DNA recognition sites.

Studies are in progress to determine whether thyroid hormones can inhibit the transcriptional activity of the human preproTRH gene. To explore this question, we



**Figure 1.** Structure of the human preproTRH cDNA and gene, and sequencing strategy. The top line shows a schematic diagram of the human preproTRH cDNA, indicating the 5' untranslated region (5' - UT), the signal peptide, the preproTRH encoding region, the 3' untranslated region (3' - UT), and the poly(A) tail (solid line). The solid boxes represent the TRH coding sequences. The bottom line shows a representation of the human preproTRH genomic gene. Exons are represented by open boxes. Vertical connecting lines indicate relationships between structural regions of the cDNA and exons of the genomic DNA. The horizontal arrows beneath the genomic DNA denote the direction and extent of sequence determinations.

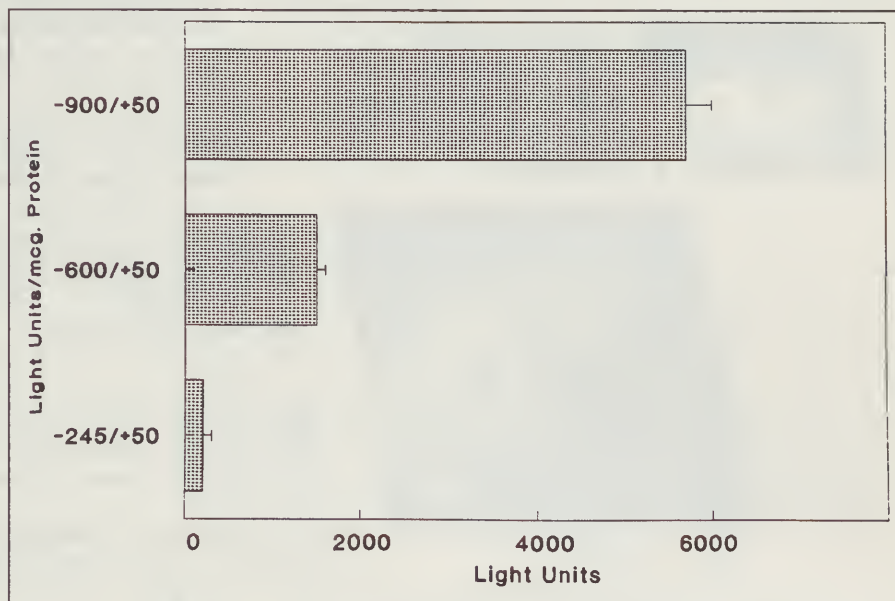


have incorporated the regulatory portion of the gene (the 5' flanking region, from base pair -900 to +54) into a plasmid (a circular double-stranded DNA form) containing the firefly luciferase enzyme, which in nature generates light by chemiluminescence. When the human TRH gene in this plasmid is transfected into an appropriate tissue-cultured cell line, the amount of light generated in a test tube can be measured to reflect quantitatively the amount of TRH gene promoter activity.

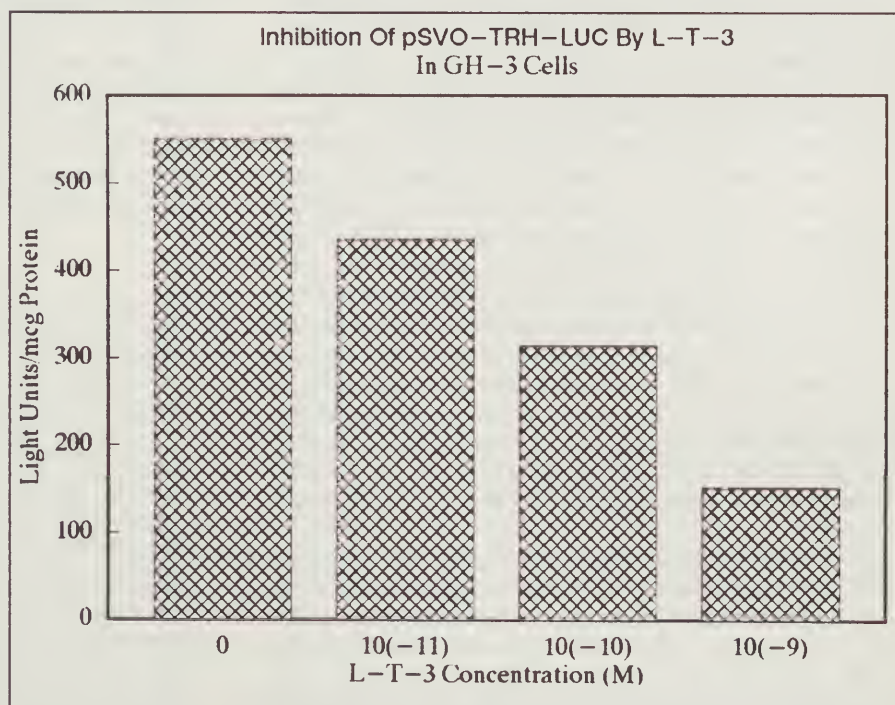
We have discovered that two different 5' deletion mutants (-600 to +54) and (-250 to +54) show substantial and progressive loss of gene activity as compared to the full wild-type mutant (-900 to +54) (Figure 2). Most interestingly, the addition of  $T_3$  into the cell culture medium at physiological concentrations for man ( $10^{-9}M$ ) causes marked inhibition of TRH gene expression (Figure 3). In striking contrast, only slight and insignificant inhibition was produced by  $T_3$  when the plasmid contained another non-TRH viral promoter (SV<sub>40</sub>) in the absence of the specific TRH DNA sequence (-900 to +54 bp). From these studies, we infer that the human preproTRH gene, strongly expressed in tissue-cultured cells, has at least two promoter elements between bases -900 and +54 of the preproTRH gene. Moreover,  $T_3$  can inhibit the expression of the TRH gene directly, confirming that thyroid regulation in man is accomplished not only at the level of the pituitary but also at the level of the hypothalamus by blocking DNA transcription of specific TRH messenger RNA.

The availability of the complete human gene for TRH makes possible, for the first time, the identification of potential abnormalities in TRH gene structure in patients with hereditary deficiency of TRH (tertiary hypothyroidism). As a first step toward elucidation of such genetic abnormalities, we have investigated the chromosome localization of this gene, using human-hamster cell hybrids containing one of each of the human chromosomes (the 22 autosomes, and the X and Y chromosomes). We localized the gene with a  $^{32}P$ -cDNA probe specific for human

preproTRH. We have been able to establish that this radioactive probe hybridized with only a single DNA band derived from human white blood cells after DNA digestion with the restriction endonuclease (EcoRI), confirming that the human gene is a single copy gene. Moreover, under identical conditions, no hybridiza-



**Figure 2.** Progressively diminished preproTRH gene promoter activity is expressed on the horizontal axis in light units per  $10\mu g$ /protein. The three 5' flanking region mutants were ligated into fusion plasmids also containing the enzyme luciferase. The number of DNA base pairs are shown on the vertical axis, and luminometer light units/ $10\mu g$  protein from cell lysates are shown on the horizontal axis.



**Figure 3.** The effect of L- $T_3$  *in vitro* upon the activity of the fusion plasmid construct preproTRH (5' flanking region) - luciferase transfected into rat pituitary cells. Significant inhibition of gene activity was seen at all L- $T_3$  concentrations from  $10^{-11}$  to  $10^{-9}M$ , and at  $10^{-9}M$ ; the inhibition was -71 percent,  $p < 0.001$ . The right-hand bar labelled "0" represents the wild-type gene, whose 5' flanking region was complete (-900 to +54 bp).

**ADVANCED MRI DIAGNOSTICS  
FOR THE BALTIMORE-WASHINGTON  
CORRIDOR MEDICAL COMMUNITY**



7120 Contee Road  
Laurel, Maryland 20707

The Maryland Diagnostic Imaging Center provides magnetic resonance imaging (MRI), offering clinicians access to anatomical and biochemical information often unavailable through older diagnostic methods.

MRI is non-invasive and does not require radiation, but uses magnetism, radio waves and computers to produce images with unparalleled anatomical information. MRI scans involve no known risk.

The Maryland Diagnostic Imaging Center is conveniently located on the campus of the Greater Laurel-Beltsville Hospital, one-half mile east of Interstate 95.

- Excellent suburban location;
- A radiologist is available for professional consultation;
- Immediate reports;
- A FAX is on site for scheduling or processing reports;
- We hand deliver duplicate films to your office.
- Evening hours available.

Most Maryland area insurers cover MRI.

**TO SCHEDULE APPOINTMENTS FOR YOUR  
PATIENTS, CALL US AT (301) 725-8995.**

tion occurred with hamster cell DNA, documenting the suitability of the hybrid cell system for human gene localization.

We then performed hybridizations with DNA from twenty-nine of these cell lines after digestion of their DNA with the restriction enzyme EcoRI. We correlated the presence or absence of a specific human chromosome with the hybridization signals generated. Statistical analysis indicated complete concordance between the preproTRH gene and human Chromosome 3.<sup>7</sup> The assignment to human Chromosome 3 of the TRH gene is of particular interest as this chromosome also contains the gene for one of the binding proteins for T<sub>4</sub> and T<sub>3</sub> involved in the regulation of gene transcription. Moreover, future mapping of the human preproTRH gene to a specific locus within Chromosome 3 will facilitate genetic analysis of DNA derived from WBCs of patients with hereditary TRH deficiency.

In conclusion, knowledge concerning the structure of the human gene preproTRH makes possible studies of its regulation by hormones and other factors, such as cyclic adenosine monophosphate (AMP). Moreover, because there is only a single preproTRH gene copy in man, studies of potential abnormalities in its structure or regulation can now be undertaken easily in patients with hereditary TRH deficiency by extracting their WBC DNA, identifying any mutations present in the TRH gene sequence, and establishing

that the mutant gene, unlike the normal TRH gene, is not able to transcribe RNA for TRH synthesis and actions. As our studies of expression and regulation of the human TRH gene progress, we hope to uncover new locations of TRH RNA even beyond those already known, stimulating new questions and research about this fascinating, multicopy gene and its multifunctional hormone product, TRH.

### References

1. Connor TB, Thomas WC Jr., Howard JE. The etiology of hypercalcemia associated with lung cancer. *J Clin Invest* 1956;35:597.
2. Wilber JF and Yamada M. Thyrotropin-Releasing Hormone: Current Concepts in 1990. Raven, Inc., In press.
3. Mori M, Pegues J, Prasad C, Edwards RM, Wilber JF. Distribution and characterization of cyclo(His-Pro) like immunoreactivity in the rat gastrointestinal tract. *Biochem Biophys Res Commun* 1982;109:982-7.
4. Yamada M, Wilber JF. Reciprocal regulation of preprothyrotropin-releasing hormone (TRH) mRNA in the rat anterior hypothalamus by thyroid hormone: Dissociation from TRH concentrations during hypothyroidism. *Neuroendocrine* 1989;15:49-53.
5. O'Malley B. The steroid receptor superfamily: More excitement predicted in the future. *Molecular Endo* 1990; 4:363-9.
6. Yamada M, Radovick S, Wondisford FE, Nakayama Y, Weintraub BD, Wilber JF. Cloning and structure of human genomic DNA and hypothalamic cDNA encoding human prepro-thyrotropin-releasing hormone. *Molecular Endo* 1990;4:551-6.
7. Yamada M et al. The human gene for preproTRH is localized to chromosome 3. Abstracts to 72nd Annual Meeting of the Endocrine Society, 1990:226 Somatic Cell and Molecular Genetics, In press. ■



---

# Enteric Vaccines

---

Robert Edelman MD and Myron M. Levine MD

---

*Dr. Edelman is Professor of Medicine and Associate Director for Clinical Research in the Division of Geographic Medicine and Dr. Levine is Professor of Medicine and Pediatrics, and Director of the Geographic Medicine Division of the Department of Medicine, University of Maryland School of Medicine, Baltimore. Reprints: Robert Edelman MD, University of Maryland School of Medicine, 10 South Pine St., Room 9-34, Baltimore, MD 21201.*

---

*Considerable progress has been made in the past decade in developing vaccines against the most important bacterial and viral infections of the gastrointestinal tract.*

---

The fundamental objective of the Division of Geographic Medicine in the Center for Vaccine Development (CVD) is to carry out research related to the control of major communicable diseases, particularly enteric infections, by means of immunizing agents. The pursuit of such an undertaking requires a multidisciplinary approach to the development and testing of new and improved vaccines. Research at the CVD begins with basic molecular genetics and biotechnology that generate new vaccine candidates; continues through small clinical trials in volunteers, testing for safety and immunogenicity; and concludes with large-scale, randomized, controlled trials to evaluate the protective efficacy of vaccines in the field.

Currently, the CVD conducts research on vaccines against the enteropathogens causing cholera, typhoid fever, dysentery, traveller's diarrhea, and infant diarrhea. Scientists at the CVD also test the pathogenicity of suspected new enteropathogenic agents. In addition, the CVD is investigating vaccines against AIDS, malaria, hepatitis, pertussis, *Haemophilus influenzae* type B, and selected gram-negative bacilli.

This review will focus on vaccines against several important enteropathogenic agents of special interest to many of the Center's nineteen faculty and sixty staff members. We will summarize the important contributions made by CVD investigators to the prevention of these enteric infections, research that began fifteen years ago with the founding of the CVD. Included in our discussion will be vaccines against *V. cholerae*, *Salmonella typhi*, *Shigella*, enterotoxigenic *Escherichia coli*, and rotavirus.

## Background on Vaccines Against Enteric Pathogens

Enteric infections causing secretory diarrhea, dysentery, and enteric typhoid fever are an important public health problem worldwide.<sup>1-3</sup> Since the early 1970s, many new viral, bacterial, and protozoal agents causing these afflictions have been identified.

The list of enteropathogens has lengthened so markedly in the past fifteen years that one might ask whether a score of different vaccines might be necessary to prevent endemic pediatric diarrhea and traveller's diarrhea. Fortunately, only a relative handful of etiologic agents account for the vast majority of clinically and epidemiologically important illnesses. For example, a small number of bacterial agents, including enterotoxigenic *Escherichia coli*, enteropathogenic *E. coli*, *Shigella*, and *Vibrio cholerae* 01, and one virus, rotavirus, combine to cause a major proportion of the diarrheal illness of public health importance worldwide, while *Salmonella typhi* is by far the major cause of enteric fever. If safe and practical vaccines existed that were effective against just these agents, much of the disease burden due to enteric infections could be reduced.<sup>4</sup> The status of vaccines against these various enteropathogens will be reviewed here, emphasizing those vaccines that have reached the stage of licensure, controlled field trials of efficacy, or early clinical trials for safety and immunogenicity in volunteers.

### Vaccines Against Typhoid Fever

**Inactivated Whole Cell Typhoid Vaccines.** Inactivated *S. typhi* parenteral vaccines have been licensed and used for many decades. While they provide greater than 80 percent protective efficacy against typhoid fever, they are not ideal for immunizing children in endemic areas, or travelers to endemic areas, because they often cause rather severe febrile reactions and induce inflammation at the site of vaccination.<sup>4</sup>

**Ty21a, Live Oral Typhoid Vaccines.** As a result of adverse reactions caused by parenterally-administered, inactivated typhoid vaccines, an attenuated strain of *S. typhi*, Ty21a, was developed at the Swiss Serum and Vaccine Institute by chemical mutagenesis of a pathogenic *S. typhi* strain.<sup>5</sup> Placebo-controlled clinical trials of this live, orally-administered vaccine have shown it to be free of local gastrointestinal or systemic side effects while offering considerable protection. Among the first human studies were those carried out at the Maryland State Prison at Jessup by University of Maryland investigators.<sup>6</sup> Since those successful pioneering trials in adult volunteers, several large field trials of Ty21a have been conducted in Alexandria, Egypt<sup>7</sup> and in Santiago, Chile.<sup>8,9</sup>

In the first field trial of efficacy conducted in Alexandria, Egypt, 32,000 school children, six to seven years of age, were randomized to receive three doses of vaccine within one week. The children were fed a liquid formulation containing between one to three billion vaccine organisms per dose.<sup>7</sup> Because the Ty21a organisms are rather rapidly killed by gastric acid, the children chewed a 1.0 gram tablet of NaHCO<sub>3</sub> several minutes before ingesting the vaccine or placebo to neutralize gastric acid. Thus the organisms were protected and able to enter the small intestine where they were taken up by Peyer's patches. Here they replicated for several days and immunized the host

before the genetic mutations in the Ty21a strain eventually led to their self-destruction.

During three years of surveillance in Egypt, Ty21a provided 96 percent protective efficacy against confirmed typhoid fever. Based on these promising results, the Swiss Serum and Vaccine Institute prepared two more easily administered vaccine formulations for trial in Chile by CVD investigators who tested 109,000 children.<sup>8</sup> One formulation consisted of gelatin capsules containing lyophilized vaccine and NaHCO<sub>3</sub>; the second formulation consisted of lyophilized vaccine in enteric-coated capsules which are stable for several hours in gastric acid and open only at a pH of 6.5. The enteric-coated capsules were significantly superior to the gelatin capsules, both given as three doses within one-week or at twenty-one-day intervals. Three doses of Ty21a in enteric-coated capsules have provided 65 percent efficacy for at least five years with no sign yet of diminishing protection.<sup>9</sup> In another field trial in Santiago by CVD and Chilean investigators, four doses of Ty21a vaccine were superior to two or three doses.<sup>10</sup> Because of its exceptional safety, ease of administration, proven practicality for large-scale vaccinations, and moderate efficacy for at least five years, Ty21a has become a public health tool for control of endemic typhoid and an attractive option for immunizing travelers. The vaccine was licensed in the United States in December 1989, and is available in the form of enteric-coated tablets taken every other day for four doses.

**Purified Vi Polysaccharide Vaccines.** Virtually all strains of *S. typhi* isolated from patients with acute typhoid fever have a polysaccharide capsule antigen on their surface, the Vi antigen. Purified Vi as a parenteral vaccine was first tested for safety and antigenicity in Maryland volunteers at the CVD.<sup>11</sup> Since then, purified Vi has been given as a parenteral vaccine in recent field trials in Nepal<sup>12</sup> and South Africa.<sup>13</sup> The vaccine was well-tolerated and provided 72 percent and 64 percent protection lasting for seventeen months and twenty-one months, respectively, against typhoid fever. An advantage of the Vi vaccine is that it provides a moderate level of protection after a single dose. Attempts are underway to further refine the Vi vaccine and improve its potency.

### Vaccines Against Cholera

Inactivated whole-cell parenteral vaccines have been used for the past ninety years. Unfortunately, licensed vaccines are highly reactogenic and protect older children and adults only for a few months. Because *V. cholerae* does not invade the intestinal wall and secretory immunoglobulin A (SIgA) is thought to be the critical mediator of immunity, modern approaches to improve cholera vaccines have focused on oral vaccines to more efficiently stimulate SIgA intestinal antibody.

**Nonliving Oral Cholera Vaccines.** Investigators at the CVD first successfully tested two nonliving oral vaccines in Maryland volunteers. The vaccines consisted of killed whole vibrios or whole vibrios in combination



with the B subunit of cholera toxin (the immunogenic nontoxic portion of the cholera toxin molecule).<sup>14</sup> Subsequently, a large-scale, placebo-controlled field trial in 62,285 Bangladeshis showed that three doses of the vaccines provided 50 to 52 percent efficacy overall at three years of follow-up, with efficacy in young children (23 to 26 percent) considerably lower than in older persons (63 to 68 percent).<sup>15</sup>

The inactivated oral vaccines represent a major improvement in protection against cholera. They confirm the rationale for use of the oral route of immunization and demonstrate that improved vaccines can provide several years duration of protection against cholera. However, these vaccines suffer from two drawbacks: young children are not protected well, and multiple-spaced doses must be administered to elicit protection. Several live oral cholera vaccines have been developed in an attempt to overcome these weaknesses of the oral killed vaccines.

**Live Oral Cholera Vaccines.** The CVD has participated in the development and testing of several live, attenuated cholera vaccine candidates.<sup>16-19</sup> To date, the more promising vaccines have been prepared by deleting the genes encoding the A subunit of cholera toxin from known pathogenic strains of *V. cholerae* 01,<sup>18,20</sup> leaving in place other *V. cholerae* virulence factors which immunize the host without causing clinically important diarrhea. One such genetically engineered strain, CVD 103, produced no cramps and only a very mild diarrhea in six of fifty-two individuals who ingested a dose of 10<sup>8</sup> organisms. In experimental challenge studies in Maryland volunteers, a single oral dose of CVD 103 provided significant protection against challenge with pathogenic *V. cholerae* 01 strains.<sup>19</sup>

In order to study cholera vaccines in countries where cholera is endemic, a way must be found to distinguish vaccine strains from strains of wild vibrios. Dr. J. Kaper at the CVD accomplished this by encoding resistance to Hg<sup>++</sup> into the chromosome of the vaccine strain. This further-modified strain, CVD 103-HgR, produced loose stools in only three of 127 Maryland volunteers, elicited antibody responses equal to its parent CVD 103, and provided significant protection against experimental challenge.<sup>19</sup> Importantly, the serological responses in Maryland volunteers following a single oral dose of CVD 103-HgR were significantly higher than those after three spaced oral doses of the B subunit/killed whole cell vaccine, thereby demonstrating superiority of the living vaccine for use in the field. Clinical trials for safety and immunogenicity with CVD 103-HgR are in progress in Thailand<sup>21</sup> and Indonesia using a practical formulation consisting of lyophilized vaccine organisms and a buffer powder. If safe and immunogenic in children living in less-developed countries, the vaccine will be tested in large-scale field trials for protective efficacy.

### Shigella Vaccines

Killed *Shigella* organisms inoculated parenterally

stimulate high levels of circulating antibody but fail to protect man from challenge with virulent *Shigella*. By contrast, attenuated strains of *Shigella* were developed as live oral vaccines in the 1960s. Although protective in some instances, most of these early vaccine candidates suffered from drawbacks, such as the requirement for multiple doses, the necessity to administer an annual booster to maintain protection, genetic reversion to virulence, and dose-related vomiting.

The newest generation of live oral *Shigella* vaccines are under clinical trial at the CVD. In these vaccines, selected genetic elements of virulent *Shigella* species are introduced (cloned) into nonvirulent strains of *Salmonella typhi*<sup>22-23</sup> or *E. coli*.<sup>24</sup> These laboratory-altered carrier strains colonize or infect the bowel without producing illness and express the antigens coded by the *Shigella* genes they carry, thus quietly inducing an immune response in the host. Studies are underway at the CVD to determine if these immune responses protect the vaccinee from disease caused by virulent *Shigella* challenge.

### Vaccines Against Enterotoxigenic Escherichia Coli

Evidence from both volunteer studies and epidemiological surveys shows that prior infection with enterotoxigenic *E. coli* (ETEC) confers immunity. Protection is believed to be mediated by secretory IgA antibody directed against *E. coli* fimbrial colonization factors and against heat-labile enterotoxin (LT). Vaccine candidates of several types, including both nonliving antigens and live oral strains, attempt to stimulate antitoxin and antifimbrial antibody. The toxin antibody prevents the large mucosal fluid flux induced by toxin, and the fimbrial antibody interferes with the ability of ETEC to colonize the gut mucosa.

**Nonliving Antigens as Oral Vaccines.** Synthetic *E. coli* toxoid stimulated antitoxin in serum and intestinal fluid of volunteers,<sup>25</sup> but protective efficacy of these toxoid vaccines has not yet been determined. The killed whole vibrio/B subunit combination oral vaccine recently field-tested in Bangladesh provided significant protection against diarrhea caused by LT-producing ETEC during the initial three months after vaccination.<sup>26</sup> This brief protection was apparently based on the strong antigenic similarity between the B subunit of the cholera toxin in the vaccine and the B subunit in LT secreted by virulent ETEC.

Purified ETEC fimbriae were antigenic in Maryland volunteers when introduced directly into the duodenum via an intestinal tube, thereby bypassing inactivation by stomach acids.<sup>27</sup> New delivery systems under test by CVD investigators that can protect protein antigens from gastric juice but allow their release in the small intestine may stimulate interest in such delicate, purified vaccines given by mouth.

**Live Oral ETEC Vaccines.** A novel ETEC strain that elaborates colonization fimbriae but not toxin, induced a prominent intestinal SIgA antifimbrial an-



tibody response in Maryland volunteers.<sup>27</sup> The vaccine protected volunteers against bowel colonization and diarrhea after challenge with a virulent ETEC strain expressing the same fimbriae contained on the vaccine strain. For future *E. coli* vaccine trials, attenuated ETEC strains are being constructed that express various colonization factor antigens and toxoid antigens.

### Vaccines Against Rotavirus

Progress has been made in the development of live oral rotavirus vaccine candidates despite uncertainty regarding the mechanisms of protection against rotavirus infections in humans.<sup>28</sup> A number of rotavirus strains isolated from rhesus monkeys or calves, and naturally attenuated for man, have entered into pediatric trials worldwide.<sup>29-32</sup> These trials revealed that mild fevers occur in 30 percent of vaccinated infants four to nine months of age, but not in younger infants. The animal rotavirus vaccine strains provide significant protection against diarrhea caused by virulent human rotavirus strains sharing the same serotype found in the vaccine,<sup>33</sup> but inconsistent protection against wild strains bearing other serotypes.<sup>34</sup>

Because serotype-specific protection against the four human rotavirus serotypes may be required, vaccines containing the four serotypes combined into a polyvalent vaccine have been developed.<sup>35</sup> These tetravalent rotavirus vaccines are under study in efficacy trials being conducted by a network of investigators worldwide.

Once the safety and efficacy of a rotavirus vaccine candidate has been established, a series of additional practical issues must be resolved. These issues include determination of the buffer to neutralize gastric acid, whether rotavirus vaccine can be given concomitantly with polio vaccine without diminishing the take of each vaccine, the optimum dose and schedule of the rotavirus vaccine in the presence and absence of breast-feeding, and the heat stability of the vaccine.<sup>34</sup>

### Summary

Considerable progress has been made in the past decade in developing vaccines against the most important bacterial and viral infections of the gastrointestinal tract. Members of the Division of Geographic Medicine in the Center for Vaccine Development have played a prominent role in the laboratory development and clinical testing of these vaccines. A new oral typhoid vaccine, Ty21a, has been licensed in the United States. A genetically engineered live oral cholera vaccine developed in the CVD is undergoing clinical trials in cholera-endemic areas. Multiple vaccine candidates against *Shigella*, enterotoxigenic *E. coli*, and rotavirus are in clinical trial in the United States or overseas. Rapid advances in molecular biology, together with new knowledge of mucosal and cellular immunity, will produce more vaccine candidates in the

future. The CVD intends to be in the forefront of these developments.

### References

1. Gorbach SL, Edelman R. Travelers' diarrhea: National Institutes of Health Consensus Development Conference. *Rev Infect Dis* 1986;8:(suppl 2):5109-27.
2. Levine MM, Losonsky G, Herrington D et al. Pediatric diarrhea: The challenge of prevention. *Pediatr Infect Dis J* 1986;5 (suppl):529-43.
3. Pickering LK, Bartlett AV, Woodward WE. Acute infectious diarrhea among children in day care: Epidemiology and control. *Rev Inf Dis* 1986;8:539-47.
4. Levine M. Typhoid fever vaccines. In: Plotkin SA, Mortimer EA Jr. (eds.) *Vaccines*. Philadelphia: WB Saunders, 1988:333-61.
5. Germanier R, Furer E. Isolation and characterization of gal E mutant Ty21a of *Salmonella typhi*: A candidate strain for a live oral typhoid vaccine. *J Infect Dis* 1975;141:553-8.
6. Gilman RH, Hornick RB, Woodward WE et al. Immunity in typhoid fever: Evaluation of Ty21a: An epimeraseless mutant of *S. typhi* as a live oral vaccine. *J Infect Dis* 1977;136:717-23.
7. Whadan MG, Serie C, Cerisier Y et al. A controlled field trial of line *Salmonella typhi* strain Ty21a vaccine against typhoid: Three year results. *J Infect Dis* 1982;145:292-5.
8. Levine MM, Ferreccio C, Black RE et al. Large-scale field trial of Ty21a live oral typhoid vaccine in enteric-coated capsule formulation. *Lancet* 1987;1:1049-52.
9. Levine MM, Taylor DN, Ferreccio C. Typhoid vaccines come of age. *Pediatr Infect Dis J* 1989;8:374-81.
10. Ferreccio C, Levine MM, Rodriguez H et al. Comparative efficacy of two, three or four doses of Ty21a live oral typhoid vaccine in enteric coated capsules. *J Infect Dis* 1989;159:766-9.
11. Tacket CO, Ferreccio C, Robbins JB et al. Safety and characterization of the immune response to two *Salmonella typhi* Vi capsular polysaccharide vaccine candidates. *J Infect Dis* 1986;154:342-5.
12. Acharya IL, Lowe C, Thapa R et al. Prevention of typhoid fever in Nepal with the Vi capsular polysaccharide of *Salmonella typhi*: A preliminary report. *N Engl J Med* 1987;17:1101-4.
13. Klugman K, Gilbertson IT, Koornhof HJ et al. Protective activity of Vi capsular polysaccharide vaccine against typhoid fever. *Lancet* 1987;2:1165-9.
14. Black RE, Levine MM, Clements ML et al. Protective efficacy in humans of killed whole-vibrio oral cholera vaccine with and without the B subunit of cholera toxin. *Infect Immun* 1987;55:1116-20.
15. Clemens JD, Sack DA, Harris JR et al. Field trial of oral cholera vaccines in Bangladesh: Results from three-year follow-up. *Lancet* 1990;335:270-3.
16. Levine MM, Kaper JB, Herrington D et al. Volunteer studies of deletion mutants of *Vibrio cholerae* 01 prepared by recombinant techniques. *Infect Immun* 1988;56:161-7.
17. Forrest BD, LaBrooy JT, Attridge SR et al. A candidate live oral typhoid/cholera vaccine is immunogenic in humans. *J Infect Dis* 1984;159:145-6.
18. Kaper JB, Loekman H, Baldini MM et al. Recombinant live oral cholera vaccine. *Biotechnology* 1984;2:245-348.
19. Levine MM, Kaper JB, Herrington D et al. Safety, immunogenicity and efficacy in man of recombinant live oral cholera vaccines, CVD103 and CVD103-HgR. *Lancet* 1988;2:467-70.
20. Mekalanos JJ, Swartz SJ, Pearson GDN et al. Cholera toxin genes: Nucleotide sequence deletion analysis and vaccine development. *Nature* 1983;306:551-7.
21. Migasena S, Pitisuttitham P, Prayurachong B et al. Preliminary assessment of the safety and immunogenicity of live oral cholera vaccine strain CVD 103-HgR in healthy Thai adults. *Infect Immun* 1989;57:3261-4.
22. Formal SB, Baron LS, Kopiko DJ et al. Construction of a potential bivalent vaccine strain; Introduction of *Shigella sonnei* form I antigen gives into the gal E. *Salmonella typhi* Ty21a vaccine strain. *Infect Immun* 1981;34:746-60.
23. Black RE, Levine MM, Clements ML et al. Prevention of shigellosis by a *Salmonella typhi*-*Shigella sonnei* bivalent vaccine. *J Infect Dis* 1987;155:1260-5.



## You Manage The Office Let Us Do The Rest!

Low Cost Initial Investment	Claims Resubmission
Daily Management Reports	HCFA 1500 Forms
Accounts Receivable Report	Third Party Billings
Service Analysis Report	On-Line Trans. History
Aging Reports	Creating Patient Statements
BC & BS of MD Forms	Statement Mailing Services
MediCare Forms	On-Going Support
Medical Assistance Forms	In-House Training
Electronic Submission	Complete Documentation

To Put The Computer Center, Inc.  
Mainframe Computer To Work  
For You, Just Call:

**(301) 728-3883**



## PROFESSIONAL COMPOUNDING CENTER OF BALTIMORE (Kaye's AID Pharmacy)

DAVID B. LIEBMAN, R.Ph.  
Compounding Pharmacist

6913 Belair Road  
Baltimore, MD 21206

**We Make Medicines  
for Your Patients' Special Needs**

**We ship anywhere  
by UPS FAST SERVICE**

**ABSOLUTELY no cost to the Physician**

**DOCTOR, WHAT CAN WE MAKE FOR YOU?**

**Call or Fax us today!**

**(301) 665-5192 • Fax 301-668-8533**

**Toll free 1-800-673-8277**

### Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of the  
*Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel

MMJ 1211 Cathedral Street  
Baltimore, MD 21201

#### Old Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

#### New Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_

Date: \_\_\_\_\_

24. Formal SB, Hall TH, Kapfer C et al. Oral vaccination of monkey with an invasive *Escherichia coli* K12 hybrid expressing *Shigella flexneri* 2a somatic antigen. *Infect Immun* 1984;46:465-9.

25. Klipstein FA, Engert RF, Houghten RA. Immunization of volunteers with a synthetic peptide vaccine for enterotoxigenic *Escherichia coli*. *Lancet* 1986;1:471-3.

26. Clemens J, Sack DA, Harris JR et al. Cross-protection by B subunit-whole cell cholera vaccine against diarrhea associated with heat-labile toxin-producing enterotoxigenic *Escherichia coli*: Results of a large-scale field trial. *J Infect Dis* 1988;158:372.

27. Levine MM, Morris JG, Losonsky G et al. Fimbriae (pili) adhesins as vaccines. In: Lark DJ (ed.). *The Molecular Biology of Microbial Pathogenicity*. London: Academic Press, 1986:143-5.

28. Edelman R, Flores J, Kapikian AZ. Immunity to rotaviruses. In: Mestecky J and McGhee J (eds.). *Proceedings of the Symposium on Oral Immunization*. New York: Springer-Verlag, 1989:123-36.

29. Losonsky G, Rennels MB, Kapikian AZ et al. Safety, infectivity, transmissibility and immunogenicity of rhesus rotavirus vaccine (MMR 18006) in infants. *Pediatr Infect Dis J* 1986;5:25-9.

30. Rennels MD, Losonsky GA, Shindledecker CL et al. Immunogenicity and reactogenicity of lowered doses of rhesus rotavirus vaccine strain MMU 18006 in young children. *Pediatr Infect Dis J* 1987;6:260-4.

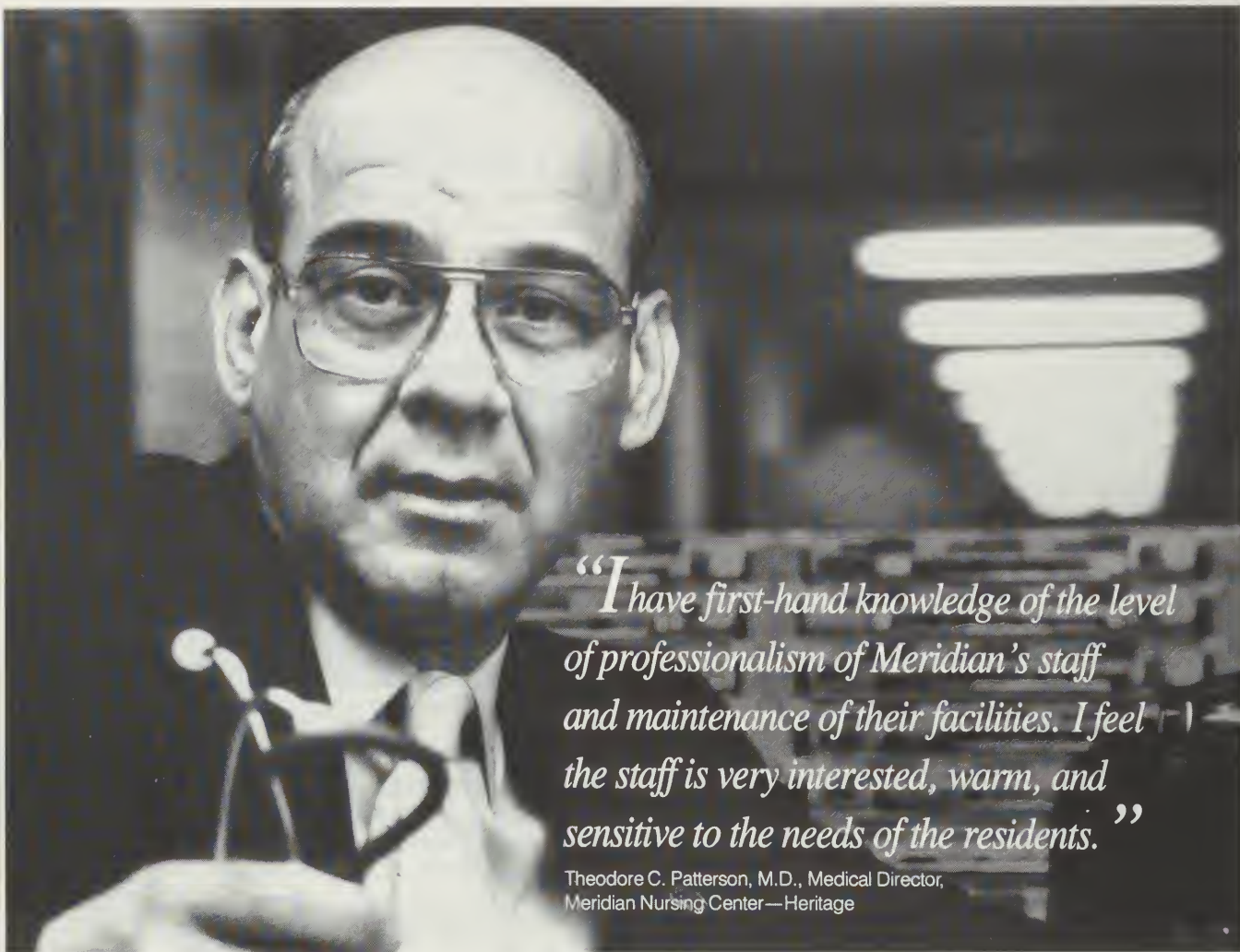
31. Rennels MB, Losonsky G, Young AE et al. An efficacy trial of the rhesus rotavirus vaccine in Maryland. *Am J Dis Child* (in press).

32. Pichichero ME, Losonsky G, Rennels MB et al. Effect of dose and a comparison of measures of vaccine taken for oral rhesus rotavirus vaccine. *Ped Infect Dis J* 1990;9:329-34.

33. Flores J, Perez-Schael I, Gonzalez M et al. Protection against severe rotavirus diarrhea by rhesus rotavirus vaccine in Venezuelan infants. *Lancet* 1987;1:882-4.

34. Edelman R. Prospective on the development and deployment of rotavirus vaccines. *Pediatr Infect Dis J* 1987;6:704-10.

35. Kapikian AZ, Flores J, Hoshino Y et al. Rotavirus: The major etiologic agent of severe infantile diarrhea may be controllable by a "Jennerian" approach to vaccination. *Rev Infect Dis* 1986;153:815-22. ■



*“I have first-hand knowledge of the level of professionalism of Meridian’s staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents.”*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer’s patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there’s our full-time activity directors, social workers, and dieticians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





---

# Frontiers in Gastroenterology: New Clinical and Research Opportunities

---

Jonathan B. Schreiber MD, Stephen J. Meltzer MD,  
and Sudhir K. Dutta MD

---

*From the Gastroenterology Division, Department of Medicine, Baltimore Department of Veterans Administration Medical Center and University of Maryland School of Medicine where Drs. Schreiber and Meltzer are Assistant Professors of Medicine, and Dr. Dutta is Professor of Medicine and Acting Head of the Gastroenterology Division. Reprints: Sudhir K. Dutta MD, Gastroenterology Division (N3W62), University of Maryland Hospital, 22 South Greene St., Baltimore, MD 21201.*

---

*Gastroenterologists are now able to use fiberoptic endoscopy to stop life-threatening hemorrhages, to apply laser beams to ablate nonresectable obstructing cancers, and to relieve biliary tract obstruction.*

---

Gastroenterology as a subspecialty of Internal Medicine has undergone a dramatic metamorphosis in the past decade. Limited to antacids, steroids, and antidiarrheal agents in the past, gastroenterologists today are able to use fiberoptic endoscopy to stop life-threatening hemorrhages in the gastrointestinal tract, apply laser beams to ablate nonresectable obstructing cancers of the esophagus and rectum, and remove common bile duct stones to relieve biliary tract obstruction. While research in gastroenterology ten years ago centered around studies of gastric acid secretion and ionic fluxes in the small intestine and colon, investigators are now using techniques of molecular and cell biology to investigate basic questions of carcinogenesis in the gastrointestinal tract and important clinical problems such as the increased propensity of cigarette smokers to develop peptic ulcer disease. This manuscript provides the reader with an update on some of these exciting new developments in clinical and investigative gastroenterology.

## Invasive Biliary Tract Endoscopy

The ability to perform endoscopic cannulation of the ampulla of Vater introduced a new era of nonoperative visualization of the pancreas and biliary tree. Diagnostic endoscopic retrograde cholangiopancreatography (ERCP) supplements radiographic visualization of liver and pancreatic anatomy by sonography and computerized tomographic scanning and often provides information that could otherwise be obtained only at laparotomy. In recent years, indications for ERCP have evolved as a range of related therapeutic techniques have been introduced. Sphincterotomy of the ampulla for gallstone removal and endoscopic insertion of stents into the biliary tree to relieve obstruction enable gastroenterologists to endoscopically treat patients who previously would have required surgical intervention. Endoscopic sphincterotomy (ERS) is performed using electrocautery to make a small

incision through the muscle fibers of the sphincter of Oddi. ERS was initially reserved for patients without a gallbladder who had common bile duct stones after a cholecystectomy or in whom stones formed years later in the common bile duct (Figure 1). More recently, however, ERS has been used in high-risk patients with common bile duct stones and intact gallbladders when the expected surgical mortality and morbidity of cholecystectomy and common bile duct exploration are judged to be high. Furthermore, it is now recognized that an ERS may be lifesaving in cases of severe acute gallstone pancreatitis by permitting passage of the stone producing the pancreatitis.<sup>1</sup> Similarly, acute cholangitis due to gallstone obstruction of the common bile duct was regarded as a relative contraindication to ERCP in the past. However, this diagnostic procedure coupled with sphincterotomy is now considered preferable to surgical intervention.

Obstructive jaundice due to pancreatic or cholangiocarcinoma is another difficult clinical problem which can be addressed with therapeutic biliary endoscopy. Pancreatic cancer is rarely resectable due to its advanced nature by the time a clinical diagnosis is made, and palliative relief of biliary obstruction is often desirable. Recent evidence suggests that both surgical decompression of malignant biliary obstruction and percutaneous biliary stent insertion carry a higher morbidity and mortality rate than endoscopic stenting of the bile duct.<sup>2,3</sup> In the latter procedure, a sphincterotomy is performed and a large hollow tube which bridges the obstructing tumor is passed through the endoscope into the bile duct. Bile also flows through the tube into the duodenum so both obstruction and jaundice are relieved. The procedure can be performed

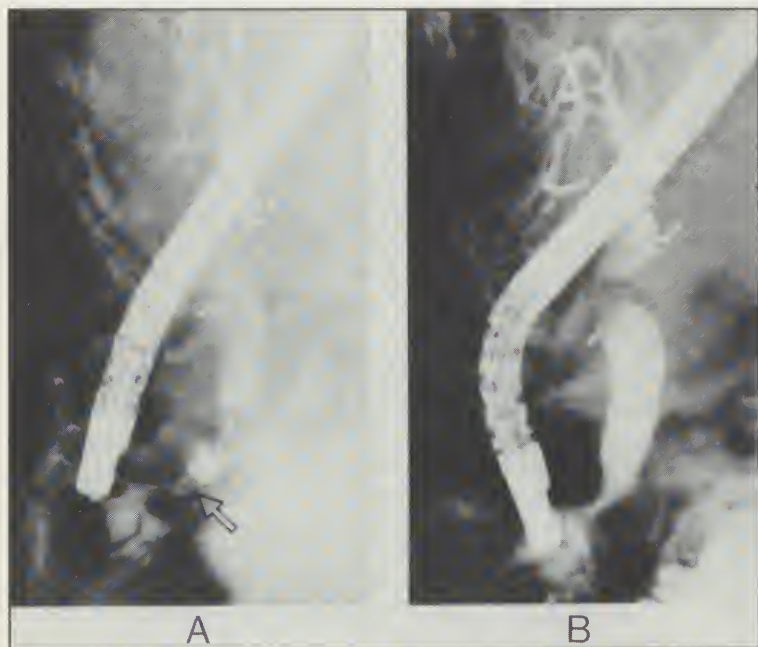
under light intravenous sedation with an overnight hospital stay and offers a dramatic improvement in the quality of a patient's life with minimal risk or disruption of daily routine.

A recently developed diagnostic capability of ERCP is biliary manometry for evaluation of post-cholecystectomy syndrome. Many patients develop abdominal pain after gallbladder surgery which is very similar to preoperative clinical symptoms. This pain may be due to dysfunction of the sphincter of Oddi (also known as biliary dyskinesia), papillary stenosis, or stenosing papillitis. Such patients have traditionally been very troublesome to evaluate and treat; generally patients have undergone extensive testing and therapeutic trials, all with negative results, before the correct diagnosis is made. Using a technique pioneered by Greenen,<sup>4</sup> biliary manometry can provide a definitive diagnosis of biliary dyskinesia. A pressure transducer is introduced into the bile duct via the ampulla using an endoscope, and pressure measurements are made in the sphincter of Oddi. If pressures are high in frequency, amplitude, or duration, a diagnosis of sphincter-of-Oddi dysfunction is made. ERCP with biliary manometry can thus assist in evaluation of a clinically obtuse problem, that of severe, right, upper-quadrant abdominal pain after gallbladder removal. Perhaps more importantly, endoscopic sphincterotomy has been shown to provide effective therapy for these patients. In a recent randomized, controlled trial published in the *New England Journal of Medicine*,<sup>5</sup> Greenen et al demonstrated that sphincterotomy provided dramatic pain relief for biliary dyskinesia.

Future advances on the horizon of biliary tract endoscopy include the use of endoscopic ultrasound for diagnosis and staging of tumors, laser lithotripsy of common bile duct stones, and the use of mini scopes to permit direct visualization of bile and pancreatic ducts. Over the next several years, these techniques should continue to expand rapidly developing capabilities for nonsurgical management of pancreaticobiliary disease.

### Oncogenes and Suppressor Genes in Gastrointestinal Cancer

The molecular basis of premalignant and cancerous gastrointestinal diseases is one of the most exciting areas of current gastroenterological research. As an example, key molecular events in the pathogenesis of colon cancer have been elucidated within the past two years. Proto-oncogenes are a group of evolutionary-conserved genes known to play a pivotal role in the regulation of cell growth and differentiation;<sup>6</sup> mutations in these genes are associated with deregulation of cell growth. In 1987, Bos et al and Forrester et al discovered a high incidence of mutations in *ras* family proto-oncogenes in cancers and precancerous polyps of the colon.<sup>7,8</sup> In the same year, the gene responsible for the hereditary syndrome of



**Figure 1.** A. Endoscopic cholangiogram showing a small stone (arrow) which has been pulled into the distal common bile duct by a balloon catheter (seen above the stone). Clips from a prior cholecystectomy are present. B. Post-sphincterotomy cholangiogram showing the duct free of stones.



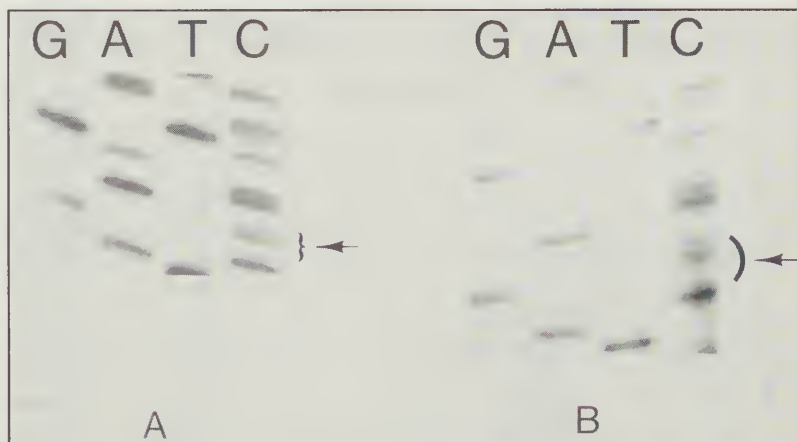
familial adenomatous polyposis (FAP) was identified.<sup>9,10</sup> Unlike *ras* genes, the FAP gene is an example of a suppressor gene or anti-oncogene. Presence of the FAP gene on chromosome 5 provides an as yet uncharacterized regulatory factor essential for maintaining normal colon growth; when FAP is lost, a normal suppressive influence on epithelial cells is removed. This concept also appears to contribute significantly to the pathogenesis of sporadic colon cancer. In 1988, Vogelstein and coworkers showed that loss of portions of chromosomes 17 and 18 occurred in 75 percent of colon cancers as well as in a smaller proportion of precancerous colon polyps.<sup>11</sup> More recently, modification of the p53 gene on chromosome 17 was found in 75 percent of colon cancers.<sup>12</sup> As with the FAP gene, p53 functions as a suppressor gene; loss of both copies of the p53 gene appears to be a stimulus for colon carcinogenesis. However, loss of one copy by deletion of a piece of chromosome 17 and inactivation of the other gene copy by a point mutation can also produce an altered, defective gene product which fails to inhibit development of colon neoplasia.

Observation of mutations in *ras* genes in premalignant colonic polyps implied that such mutations might also occur in other premalignant gastrointestinal conditions such as ulcerative colitis and Barrett's esophagus. Both diseases are associated with an increased incidence of adenocarcinoma. Before tissue progresses to carcinoma, a dysplastic phase easily identifiable using conventional histologic-staining techniques is seen. The molecular basis for this predilection to develop cancer is currently unknown; activation of oncogenes by point mutations or deletion/inactivation of cancer suppressor genes are two plausible hypotheses. Figure 2 shows a point mutation in codon 13 of the K-*ras* gene in a patient with ulcerative colitis and dysplasia of the colon. Codon 13 is the same location at which *ras* mutations are known to occur in sporadic colon cancer. The incidence of *ras* mutations in a large cohort of patients with ulcerative colitis and Barrett's esophagus is currently being determined and correlated with the patients' clinical course. Additional studies are ongoing to ascertain whether deletions of genetic material seen in colon cancer and polyps also occur in dysplasia. Candidate areas of cancer suppressor activity on chromosomes can be directly assessed by inserting gene sequences from these chromosomes into cancerous cells; if the transfected genetic material has suppressor activity, cancerous cells should revert to cells with more benign histology and growth behavior. It appears that loss of anti-oncogenic deoxyribonucleic acid (DNA) may be as equally important as oncogene activation in creating an intracellular environment which supports development of gastrointestinal cancer.

## Epidermal Growth Factor and the Gastrointestinal Tract

Epidermal growth factor (EGF) is a single chain polypeptide originally isolated from the submandibular gland of the male mouse by Stanley Cohen;<sup>13</sup> this accomplishment resulted in the Nobel Prize in Medicine in 1986. It is a single chain polypeptide with fifty-three amino acid residues, and it is resistant to proteolysis by pepsin and trypsin. A primary biological effect of EGF is its ability to induce cellular proliferation of a variety of cells in a monolayer culture system -- epithelial cells lining the gastrointestinal tract being of particular interest to the gastroenterologist. In addition, EGF markedly inhibits gastric acid secretion and provides cytoprotection from gastroduodenal ulceration in animals.<sup>14</sup> These biochemical and biological observations are consistent with the significant impact of EGF on the pathophysiological process of peptic ulceration.

In humans, EGF activity has been reported in a variety of body fluids including plasma, urine, saliva, milk, cerebrospinal fluid (CSF), and pancreatobiliary secretions.<sup>15</sup> The precise locations of EGF synthesis are not well defined. Immunohistochemical-staining techniques have demonstrated the presence of EGF most prominently in Brunner's glands of the duodenum and in salivary glands.<sup>16</sup> EGF activity in human saliva has been postulated to play a major role in the maintenance of mucosal integrity in the upper gastrointestinal tract. The range of EGF activity in parotid saliva is 0.6 to 3.8 ng/ml (Table), and this concentration of EGF has been shown to cause proliferation of dermal fibroblasts in a monolayer cell culture system. Using



**Figure 2.** Direct sequencing of DNA polymerase chain reaction products amplified around K-*ras* codon 13. The lanes on the left (A) represent a microdissected dysplastic ulcerative colitis specimen; those on the right (B) were obtained from a leukemic DNA sample. The arrows indicate position 1 of K-*ras* codon 13; the brackets surround the three nucleotides of codon 13. In the noncoding strand, position 1 is the third or uppermost nucleotide of the codon (see arrows). The sample on the left contains two bands at position 1 of codon 13: one strong band in the "C" lane, one slightly weaker band in the "T" lane. The wild-type sequence of codon 13 is GCC. Thus, the signal in the "T" lane represents mutated DNA. The predominant normal signal is contributed by one normal allele of K-*ras* from the dysplastic tissue and two normal K-*ras* alleles from contaminating normal cells. The leukemic DNA sample on the right contains only the wild-type GCC sequence at codon 13.

this same *in vitro* monolayer culture of human dermal fibroblasts, effects of human saliva on tritiated thymidine uptake as a marker of cellular proliferation were assessed.<sup>17</sup> Similar to recombinant human EGF, human saliva stimulates cellular proliferation, and this proliferative effect of human saliva on dermal fibroblasts was specifically blocked by the addition of EGF antibody to the culture system. These observations support the hypothesis that EGF activity in human saliva may play a role in stimulating mucosal regeneration and maintaining the integrity of the upper alimentary tract.

This line of investigation was extended to studies of saliva secretion in cigarette smokers. Epidemiological studies clearly show that cigarette smoking is a major risk factor in the development, maintenance, and recurrence of peptic ulcer disease. Parotid saliva secretion as well as EGF output were markedly reduced ( $P < 0.05$ ) in cigarette smokers (Figure 3). Furthermore, immunoreactive EGF in saliva of smokers had no biological activity in five cases studied.<sup>18</sup> The underlying cause of this smoking-induced inhibition of EGF secretion and reduced EGF

bioactivity in saliva of smokers is under investigation. However, these interesting research observations provide a possible explanation for the well-known clinical observations of delayed healing and frequent recurrence of peptic ulcer disease in cigarette smokers.

Now is an exciting time in both clinical and investigative gastroenterology. Formerly observers of nature, new endoscopic equipment and research technology have provided gastroenterologists with tools to modify nature.

## References

1. Neoptolemos JP, London NJ, James D et al. Controlled trial of urgent endoscopic retrograde cholangiopancreatography and endoscopic sphincterotomy versus conservative treatment for acute pancreatitis due to gallstones. *Lancet* 1988;2:979-83.
2. Bornman PC, Harries-Jones EP, Tobias R et al. Prospective controlled trial of transhepatic biliary endoprosthesis versus bypass surgery for incurable carcinoma of head of pancreas. *Lancet* 1986;1:69-71.
3. Speer AG, Cotton PB, Russell RCG et al. Randomized trial of endoscopic versus percutaneous stent insertion in malignant obstructive jaundice. *Lancet* 1987;2:57-62.
4. Greenen JE, Hogan WJ, Dodds WI et al. Intraluminal pressure recording from the human sphincter of Oddi. *Gastroenterology* 1980;78:317-24.
5. Greenen JE, Hogan WJ, Dodds WJ et al. The efficacy of endoscopic sphincterotomy after cholecystectomy in patients with sphincter-of-Oddi dysfunction. *N Engl J Med* 1989;320:82-7.
6. Barbecid M. *Ras* Gene. *Ann Rev Biochem* 1987;56:779-827.
7. Bos JL, Fearon ER, Hamilton SR et al. Prevalence of *ras* gene mutations in human colorectal cancers. *Nature* 1987;327:293-7.
8. Forrester K, Almoguera C, Han K et al. Detection of high incidence of *K-ras* oncogenes during human colon tumorigenesis. *Nature* 1987;327:298-304.
9. Bodmer WF, Bailey CJ, Bodmer J et al. Localization of the gene for familial adenomatous polyposis on chromosome 5. *Nature* 1987;328:614-20.
10. Leppert M, Dobbs M, Scambler P et al. The gene of familial polyposis coli maps to the long arm of chromosome 5. *Science* 1987;238:1411-4.
11. Vogelstein B, Fearon ER, Hamilton SR. Genetic alterations during colorectal-tumor development. *N Engl J Med* 1988;319:525-532.
12. Baker SJ, Fearon ER, Nigro JM. Chromosome 17 deletions and *p53* gene mutations in colorectal carcinomas. *Science* 1989;244:217-21.
13. Cohen S. Isolation of a mouse submaxillary protein accelerating incisor eruption and eyelid opening in newborn animals. *J Biol Chem* 1962;236:1555-63.
14. Konturek SJ, Redek T, Brozowski T et al. Gastric cytoprotection by epidermal growth factor. *Gastroenterology* 1981;81:438-43.
15. Hirata Y, Orth D. Epidermal growth factor in human fluids: Size heterogeneity. *J Clin Endocrinol Metab* 1979;48:673-8.
16. Kasselberg AG, Orth DN, Gray ME et al. Immunocytochemical localization of human EGF in several human tissues. *J Histochem Cytochem* 1985;33:315-22.
17. Dutta SK, Matossian H, Hamburger A, Vaeth J, Hlasko J. Effect of low concentrations of epidermal growth factor and human saliva on cellular proliferation of gastric mucosal explants. *Gastroenterology* 1987;92:1378.
18. Dutta SK, Moldes O, Vengurlekar S. Impaired EGF secretion in cigarette smokers. *Clin Res* 1989;37:365A.

## Acknowledgements

The authors wish to thank Ms. Valdane Robinson for her assistance in the preparation of this manuscript.

Table. EGF Activity in Human Saliva\*

	Parotid Saliva	Submandibular Saliva
Salivary Secretory Rate (ml/min)	0.76 ± 0.12	0.36 ± 0.04
EGF Concentration (ng/ml)	1.10 ± 0.10	0.38 ± 0.05
EGF Output (ng/min)	0.80 ± 0.10	0.13 ± 0.02
EGF Bioactivity (% above control)	45 ± 8	—

\* Dutta SK, et al. *Clin Res* 1986;34:795A.

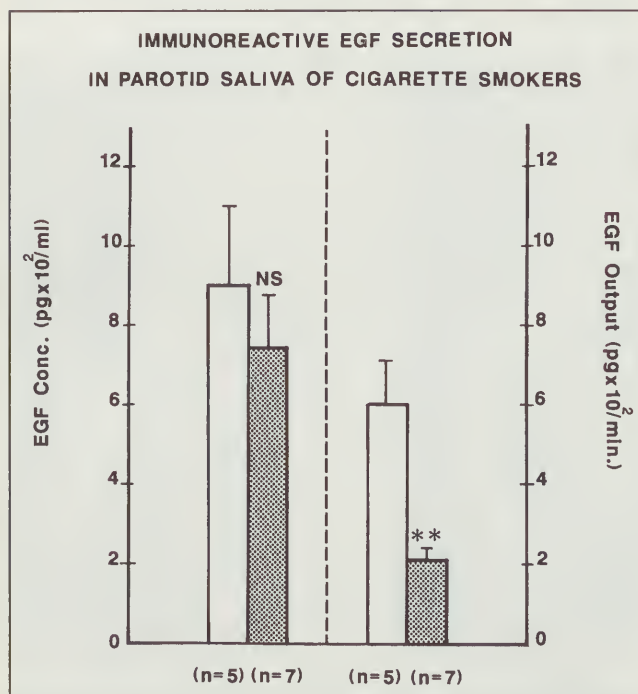


Figure 3. Comparison of immunoreactive EGF secretion in parotid saliva between controls and smokers. Control subjects - clear bars, smokers - stippled bars; n = 5 subjects in each group. Data expressed as mean + SE. \*\* indicates  $p < 0.01$ .



---

# New Concepts in the Treatment of Primary Pulmonary Hypertension

Lewis J. Rubin MD

*Dr. Rubin is Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Department of Medicine, University of Maryland School of Medicine, Baltimore. Reprints: Lewis Rubin MD, University of Maryland School of Medicine, 10 South Pine St., Room 8-00, Baltimore, MD 21201.*

---

*Recent advances provide new options for long-term treatment of primary pulmonary hypertension, an illness which is usually fatal within three years of diagnosis.*

---

Since the first clinical description of primary pulmonary hypertension (PPH) in the early 1950s, the mechanism responsible for its development has eluded clarification. While PPH is rare, with probably fewer than 200 to 300 cases diagnosed yearly in the United States, it is a tragic illness which typically affects young people in the prime of their lives, and is usually fatal within three years from diagnosis. However, several recent advances in management have provided clinicians with new options for long-term treatment of this disease. This article reviews several of these new developments and attempts to clarify their role in the present day management of PPH.

## Anticoagulation

While most patients with PPH do not have thrombotic occlusion of the pulmonary vasculature, it has been known for many years that these patients are at risk for thromboembolism because of a dilated right heart, diminished pulmonary blood flow and venous stasis, and a sedentary lifestyle. Furthermore, patients with this disease tend to die suddenly, and thrombotic material is often found in the pulmonary vascular bed at postmortem. Given the presence of a compromised circulation as a result of the underlying disease, even a small thromboembolism may be sufficient to produce a precipitous decompensation of right heart function and death. However, many physicians who manage patients with pulmonary hypertension have been reluctant to prescribe anticoagulants since fatal hemothysis has been reported due to spontaneous rupture of atherosclerotic pulmonary vessels. Additionally, adjusting the degree of anticoagulation is difficult in patients prone to hepatic congestion due to right heart failure. Fuster and his colleagues<sup>1</sup> have recently reported that PPH patients treated with anticoagulants tended to have a longer survival than those who did not receive anticoagulant therapy. Thus, while anticoagulation may not affect the hemodynamic state in PPH, it appears that it reduces the chance of a potentially life-threatening complication. Our approach is to treat patients with

warfarin, adjusting the dose to achieve a prothrombin time of approximately fifteen to seventeen seconds; an adjusted dose of heparin may be a suitable alternative in patients at risk for major bleeding complications. Heparin has also been shown to inhibit the pulmonary vascular remodeling occurring in chronically hypoxic rats; this effect, which is independent of heparin's anticoagulant properties, may provide an additional, albeit theoretical, rationale for its use.

### Oral Vasodilator Therapy

The first descriptions of the hemodynamics of PPH also included the responses of the pulmonary vascular bed to the intravenous administration of vasodilator agents, initially acetylcholine and tolazoline. While there is no selective pulmonary vasodilator identified to date, several potent systemic vasodilator agents have been shown to reduce pulmonary artery pressure or pulmonary vascular resistance in some patients with PPH. Based on a large, prospective registry of this disease supported by the National Institutes of Health (NIH),<sup>2</sup> it appears that a majority of patients with PPH manifest at least an acute response to vasodilator agents that may be considered potentially beneficial. The calcium channel-blocking agents are the most widely used vasodilators in the treatment of PPH, and long-term hemodynamic and symptomatic improvement have been reported.<sup>3,4</sup> Recently, Rich and Brundage<sup>5</sup> reported substantial and sustained regression of right ventricular hypertrophy in patients with PPH treated with large doses of nifedipine or diltiazem. Our experience suggests that 25 to 35 percent of patients will exhibit this type of dramatic response, while approximately 40 to 50 percent of patients will manifest an increase in cardiac output and activity tolerance without a substantial fall in pulmonary artery pressure. Whether the latter type of response results in improved survival remains unknown at present.

### Prostacyclin

Prostacyclin (Prostaglandin I<sub>2</sub>, PGI<sub>2</sub>), a product of arachidonic acid synthesis produced by vascular endothelium, is a potent vasodilator and inhibitor of platelet aggregation. We have used prostacyclin acutely during cardiac catheterization to determine whether acute pulmonary vasoreactivity is present in patients with pulmonary vascular disease.<sup>6</sup> Since prostacyclin is potent, titratable, and short-acting (its half-life is approximately three to five minutes), it has proven safe and predictive of reversible pulmonary vasoconstriction. In general, patients with substantial acute responses to prostacyclin can be treated with orally active vasodilators, while patients with "fixed" disease should not be treated.

Recently, we demonstrated that patients with severe PPH refractory to conventional, oral-vasodilator therapy can be effectively treated with a continuous intravenous infusion of prostacyclin.<sup>7</sup> The medication is delivered by a portable infusion pump through a

permanently implanted central venous catheter; patients are taught to mix the drug and manage their central line at home, and have displayed significant improvements in pulmonary hemodynamics and exercise tolerance. This approach, while cumbersome, may be of particular use as a bridge to transplantation in patients with the severest forms of the disease.

### Transplantation

Combined heart-lung transplantation has been considered the surgical treatment of choice for end-stage pulmonary vascular disease. However, the critical shortage of donor organs often leads to a waiting period of twelve to eighteen months, and up to 40 percent of transplant candidates die before organs are found. In addition, rejection of one or both transplanted organs can occur and, bronchiolitis obliterans, a potentially life-threatening lung disease, has occurred in 25 to 40 percent of patients.

Single or double lung transplantation has recently proved successful in patients with severe emphysema and pulmonary fibrosis. This approach has now been successfully adapted to treat selected patients with PPH. Preliminary experience has suggested that single-lung transplantation results in a dramatic reduction in pulmonary hypertension and right ventricular dysfunction, and may be a suitable surgical approach for some patients with PPH. Because a single lung is more likely to be available than a heart-lung block, the average wait for lung transplantation is only three to four months at active centers.

### The Future

At the University of Maryland, we are developing a comprehensive diagnostic and management program for patients with pulmonary vascular disease using the multidisciplinary expertise of pulmonologists, infectious disease specialists, cardiologists, surgeons, and radiologists. We hope to develop a lung-transplant program with a particular emphasis on pulmonary vascular disease, and we are among a handful of centers in the country who serve as referral institutions for medical management of PPH. We will continue to work on new approaches to the noninvasive diagnosis of pulmonary hypertension, and participate in clinical trials of therapy for this disease. Finally, basic research focusing on clarifying the unique mechanisms responsible for pulmonary vascular reactivity will eventually translate into more effective strategies aimed at preventing or treating this disease.

### References

1. Fuster V, Steele PM, Edwards WD, Gersh BJ, McGoon MD, Frye RL. Primary pulmonary hypertension: Natural history and the importance of thrombosis. *Circulation* 1984;70:580-7.
2. Weir EK, Rubin LJ, Ayres SM et al. The acute administration of vasodilators in primary pulmonary hypertension: Experience from the National Institutes of Health Registry on primary pulmonary hypertension. *Am Rev Respir Dis* 1989;140:1623-30.
3. Rubin LJ, Nicod P, Hillis D, Firth BG. Treatment of primary



pulmonary hypertension with nifedipine. *Ann Intern Med* 1983;99:433-38.

4. D'Alonzo G, Gianotti L, Dantzker DR. Noninvasive assessment of hemodynamic improvement during chronic vasodilator therapy in obliterative pulmonary hypertension. *Am Rev Respir Dis* 1986;133:380-4.

5. Rich S, Brundage BH. High-dose calcium channel-blocking therapy for primary pulmonary hypertension: Evidence for long-term reduction in pulmonary artery pressure and regression of right ventricular hypertrophy. *Circulation* 1987;76:135-41.

6. Rubin LJ, Groves BM, Reeves JT, Froscolono M, Handel F, Cato AE. Prostacyclin-induced pulmonary vasodilation in primary pulmonary hypertension. *Circulation* 1982;66:334-8.

7. Rubin LJ, Mendoza J, Hood M et al. Treatment of primary pulmonary hypertension with continuous intravenous prostacyclin (epoprostenol). *Ann Intern Med* 1990;112:485-91.

## Medical Newsletter On HOW TO PASS BOARD OF

## INTERNAL MEDICINE

To Be Mailed From March To August 1991

For a FREE Sample Copy

Mail Your Address Card To:

**Medical Newsletter**

5 Cullen Drive, West Orange N.J. 07052.

## March is Music In Our Schools Month

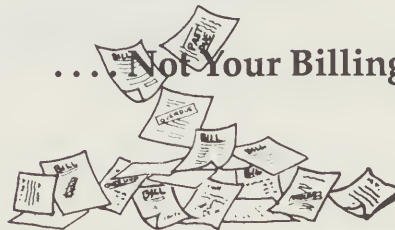
March has been designated as Music In Our Schools Month by the Music Educators National Conference. During this time, children, teachers, parents, community leaders, and music lovers everywhere celebrate the importance of music. The theme for 1991 is "A World in Tune," which highlights the global impact of music and its universality to the human experience.

The centerpiece of the celebration is the World's Largest Concert, to be broadcast over PBS stations Thursday, March 7, from 1:00 to 1:30 p.m. The concert will originate from Walt Disney World's EPCOT Center and be hosted by Grammy Award winner, Marilyn McCoo. Organizers hope to break last year's record of more than eight million participants in this televised sing-along.

Med Chi's Music Medicine Clearinghouse Committee is arranging a viewing of the concert for interested members, staff, and friends. For further information, please contact Susan Harman, Clearinghouse Coordinator, at 301-539-0872.

## You Should Be Taking Care of Your Patients

... **Not Your Billing**



**PPBSI**

Physician's Professional Billing Services, Inc.

**Leaders in technological billing since 1976**

...

Will speed up your cash and cure ailing accounts.

...

- Professional management available to represent your office to Medicare, Blue Shield, Medical Assistance and other insurance carriers.
- Our service relieves your staff from processing self-pay statements.
- Self-pay bills with individualized messages at your prescribed intervals.
- Secondary commercial insurance claims are automatically rebilled.
- A multitude of statistical reports are available, including complete financial audit trails and management reports.

...

**Call today so we may treat you.**

1•800•969•8382 / 1•301•825•5626

Locations in D.C. and Baltimore to serve you.

**PPBSI**

Physician's Professional Billing Services, Inc.

7215 York Road, Baltimore, Maryland 21212  
or phone (301) 825-5626

Please fill out and return this coupon promptly for more information about the many benefits that Physician's Professional Billing Services, Inc. can offer you.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_

# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas.... and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
maryland

Free to Med Chi members.



---

# Hypertension in Blacks

---

Carolyn J. Hildreth MD and Elijah Saunders MD

---

*Dr. Hildreth is a general internist, and Dr. Saunders is Associate Professor of Medicine and Head of the Hypertension Division, Department of Medicine, University of Maryland School of Medicine, Baltimore. Reprints: Elijah Saunders MD, University of Maryland Professional Building, 419 West Redwood St., Suite 620, Baltimore, MD 21201.*

---

*The prevalence of hypertension is significantly higher among black Americans than white Americans, and hypertension control among blacks remains unacceptably poor.*

---

Although there are an estimated 60 million hypertensives in the United States, the number of black hypertensive Americans is disproportionately higher than their representation in the population as a whole. Hypertension appears earlier in black Americans than in white Americans, and is often not treated early enough or aggressively enough, resulting in a higher prevalence of more severe hypertension among black patients, frequently accompanied by target-organ damage. Furthermore, effective treatment of hypertension in this population is hampered by several major socioeconomic and psychosocial factors -- access to medical care, cost of treatment, and educational deficits which often affect compliance.

Although the treatment of hypertension is generally improving such that the morbidity and mortality from related disease are declining, this is not occurring at the same rate among black Americans as among white Americans. The reasons for this are not entirely clear.

## Incidence and Epidemiology

The first studies to demonstrate clear differences in blood pressure between blacks and whites in this country were reported in 1932.<sup>1</sup> Adams pointed out that mean systolic and diastolic blood pressures were higher in blacks at all ages. Since that time, practically every study done in the United States has shown higher incidence and prevalence rates among blacks. It seems that the statistically significant racial differences in blood pressure occur sometime after age seventeen, although some studies have found racial differences appearing in much younger children.<sup>2,3</sup>

The 1982 Maryland Statewide Household Survey of 6,425 adults ages eighteen and older showed a hypertension\* prevalence among blacks of 26.8 percent, compared with 20.1 percent for whites (Table 1).<sup>4</sup> (These figures are similar to the national estimates in the 1971-1974 Health and Nutrition Examination Survey.<sup>5</sup>) When the patient population was broken down into age groups (eighteen

---

\*Defined as systolic blood pressure  $\geq 160$  mm Hg or diastolic  $\geq 95$  mm Hg.

to forty-nine years, and fifty years and over), blacks had higher prevalence rates for all categories (Table 2),<sup>4</sup> and the rates of hypertension were higher in black females than in black males (Table 3).

The Hypertension Detection and Follow-up Program<sup>6</sup> found that not only was hypertension one and one-half to two times more common in black than in white Americans between the ages of thirty and sixty-nine, but severe hypertension (diastolic BP  $\geq 115$  mm Hg) was five times more common in black than in white men, and approximately seven times more common in black women than in their white counterparts. Other major studies have shown that the marked black-white differences in hypertension prevalence increase as individuals age.<sup>7</sup>

**Etiology and Pathophysiology of Hypertension in Blacks: Genetic Factors**

No one has yet determined any genetic differences between black and white hypertensive individuals; whether a single gene or several are involved in the

**Table 1. Prevalence of Hypertension\* in Maryland Adults, 1982.**

Age, Race, Sex	Percentage
All blacks	26.8
All whites†	20.1
All males	23.2
All females	19.9
All 18-29 years	4.1
All 30-49 years	17.2
All 50+ years	41.7

\* Diastolic BP  $\geq 90$ , or  $< 90$  on medication.  
† Includes all nonblacks

**Table 2. Prevalence of Elevated Blood Pressure in Maryland Adults by Age, Race, Sex, 1982.**

Age, Race, Sex	DBP $\geq 90$ (Percentage)	BP $> 150/90$ (Percentage)
18-49 black males	12.2	12.6
18-49 black females	9.6	10.0
18-49 white males	12.0	12.5
18-49 white females	3.7	3.8
$\geq 50$ black males	40.5	45.5
$\geq 50$ black females	19.1	26.7
$\geq 50$ white males	21.0	27.2
$\geq 50$ white females	10.9	19.7
Total	11.4	14.0

**Table 3. Prevalence of Hypertension\* in Maryland Adults, 1982.**

Age, Race, Sex	Percentage
18-49 black males	16.0
18-49 black females	16.9
18-49 white males †	15.1
18-49 white females †	6.0
$\geq 50$ black males	56.2
$\geq 50$ black females	59.7
$\geq 50$ white males †	38.8
$\geq 50$ white females †	38.3
All groups	21.5

\* Diastolic BP  $\geq 90$ , or  $< 90$  on medication.  
† Includes all nonblacks

determination of blood pressure is unknown. However, familial aggregation of essential hypertension has been documented,<sup>7,8</sup> and Gillum pointed out that estimates of blood pressure heritability are statistically significant within black populations.<sup>9</sup> Unquestionably, both black and white hypertensives frequently give histories of elevated blood pressure in blood relatives. In fact, it is rare to encounter a hypertensive who does not know of family members with hypertension or with hypertension-related morbidity or mortality. However, it remains controversial whether genetic markers such as skin color are related to hypertension prevalence.<sup>10-12</sup>

Hormonal and physiologic differences may be associated with the ethnic disparity in the prevalence of hypertension. For example, Voors and colleagues<sup>13</sup> showed that in children between the ages of five and thirteen (63 percent white), the renin levels were higher in whites over all blood-pressure strata but were decreased in blacks. A number of investigators have reported plasma renin measurements in normotensive black and whites. Many determinations were done with renin stimulation, and most were done on ad lib sodium intake. In all of the studies, the renin levels were lower in blacks, with and without renin stimulation. This finding could be due to significant alterations of the blood supply to the juxtaglomerular apparatus and a disruption in the normal homeostatic response to renin release, to changes in plasma volume, and to renal blood flow. A second mechanism for the low-renin status in blacks could be primary volume expansion due to other intrarenal factors that promote sodium and water retention.

Other hormonal and physiologic aberrations found in black hypertensives may have some genetic basis. For example:

- Deficiency in the natriuretic vasodilatory renal kallikrein-kinin system has been postulated by Warren and O'Connor<sup>14</sup> to form the genetic basis for the pathophysiologic profiles found in many black hypertensives.
- Blacks tend to show lower values for some indices of sympathetic nervous dysfunction (e.g., lower levels of dopamine beta hydroxylase), and this seems to correlate with the diminished role of the sympathetic nervous system in the pathogenesis of hypertension in blacks.<sup>2,15</sup>
- Hemodynamic abnormalities found in many black hypertensives (especially the elderly) include a higher plasma volume. The kidneys of hypertensive blacks excrete significantly less sodium and potassium when the patient is challenged with a sodium load.<sup>16</sup>
- Cellular transport mechanisms recently have received considerable attention as potential mechanisms for development of hypertension.<sup>5</sup> Sodium-potassium cotransport and sodium-lithium countertransport have been found to be abnormal in black subjects with essential hypertension.<sup>17,18</sup> Numerous other transport systems



are currently under investigation, including circulating materials that may decrease the activity of sodium-potassium ATPase, thereby accounting for the volume-expanded form of hypertension frequently found in blacks. Conceivably, this might lead to a diminished capacity to extrude sodium (sodium-potassium pump) from smooth muscle cells, promoting an increase in intracellular calcium that, in turn, increases vasoactivity.<sup>19</sup>

- Ethnic differences in erythrocyte cation transport have been described. Woods and associates<sup>20</sup> reported a higher countertransport rate in blacks, a greater rate constant for passive lithium efflux, and a lower furosemide-sensitive efflux rate. Although whites exhibit a direct correlation between sodium lithium counter-transport and blood pressure, blacks do not. If these systems are operative in renal tubular cells or vascular smooth muscle, dysfunction in the erythrocytes may play a role in hypertension in blacks.

Blaustein and Hamlyn<sup>19</sup> have further explored this hypothesis and the role that calcium and magnesium may play, suggesting that the presence of a circulating hormone (natriuretic hormone) may facilitate the increased calcium in vascular smooth muscle cells, increasing tone and, therefore, hypertension.

- The frequency of hypertension in blacks may correlate with the increased sodium-potassium ratio found in the urine of many black hypertensives and could be related to the low dietary intake of potassium in blacks.<sup>21-24</sup> One may speculate that low potassium intake may be due either to economic factors (e.g., potassium-rich foods such as fresh fruits and vegetables may be less accessible) or to food preferences that exclude potassium-rich foods.
- Recent data linking insulin resistance to hypertension prevalence may have special applicability to the black population in which Type II diabetes and obesity (especially in black women) represent special problems. Studies by psychologists at Duke University<sup>25</sup> suggest that blacks may be more reactive to adrenergic alpha stimulation resulting in vasoconstriction and, therefore, a rise in blood pressure. Although these responses were elicited in the laboratory by cold pressor testing, the investigators suggested that such reactivity was comparable to chronic stressful lifestyles.

### Environmental Factors

Whereas most students of hypertension believe that genetic factors are necessary for the development of hypertension, there are also proponents of the environmental theory who suggest that an interaction of the environment with genetics is necessary for the development of hypertension. Proponents of the environmental theory stress that blacks are more frequently exposed to conditions of poverty, limited

education, low occupational status, and low socioeconomic stress. They propose that environmental factors can cause stress and induce transient blood-pressure elevation which, if repeated frequently, can lead to permanently elevated blood pressure.<sup>26</sup> It is further believed that eating habits (a taste for excessive salt, fat, and other nutritionally contraindicated foods) are adversely significant in blacks and are related to low socioeconomic and educational status.

### Detection, Treatment, and Control of Hypertension in Blacks

Although a decline in stroke and other cardiovascular morbid and mortal events has been occurring since the 1940s, the steeper decline since 1968 has been attributed to improved hypertension awareness, treatment, and control.<sup>27,28</sup> However, in spite of this encouraging trend from the population in general, surveys indicate that hypertension control among blacks remains unacceptably poor, particularly in view of the high prevalence.<sup>29</sup> According to Gillum and Gillum,<sup>30</sup> "High rates of noncompliance with follow-up and drug therapy, seriously compromise the effort of community-wide programs. Indeed, noncompliance with therapeutic or preventive health advice is now the major barrier to effective hypertension control in the United States." Impediments to ideal hypertension control in black communities can be divided into three categories:

1. Severity of hypertension in blacks.
2. Barriers related to the medical care system, including inadequate financial resources, inconveniently located health care facilities, long waiting times, and inaccessibility to health education, specifically as it relates to hypertension.
3. Barriers related to the social, psychosocial, and sociopolitical environment including problems of underemployment, unemployment, racism, and strained racial relationships.

### Treatment Considerations

In considering the treatment of a patient with hypertension, all aspects of that person's health care must be considered. Specifically, issues related to dietary preferences, levels of activity, and social habits including cigarette smoking and the use of alcohol will be relevant.

During the initial visit, it is possible to determine whether a diagnosis of hypertension is going to have an impact on an individual patient such that s(he) will be hampered in his or her ability to participate in the successful treatment of this problem.

Treatment for hypertension should begin with non-medicinal modalities. It is imperative for patients to learn to identify the foods they eat which are naturally high in sodium. They should be encouraged to learn to cook with other herbs and spices, such that salt naturally becomes a less frequent additive in cooking. It is also important to inform patients that the exces-



sive intake of alcohol can contribute significantly to uncontrolled hypertension.<sup>31</sup>

Patients should be informed of the risk of foods high in saturated fat and cholesterol, including many of the processed and pre-prepared foods (especially fast foods) that have become a frequent addition to the average person's diet, but particularly to that of the less affluent.

Next, issues related to activity should be addressed. These are particularly pertinent to those persons who are markedly overweight and for whom weight reduction may be expected to contribute to a decrease in blood pressure.

The issue of cigarette smoking must also be addressed. Cigarette smoking, although it has decreased nationwide, continues to decrease at a much lower rate among female patients and particularly among young less well-educated women, many of whom are black.<sup>32,33</sup>

Once lifestyle changes have been implemented, medicinal treatment may still be necessary. All patients should be classified as having either mild, moderate, or severe hypertension. As a general guideline for initiating treatment, the Joint National Committee's recommendations may be helpful for some patients with mild or moderate hypertension.<sup>34</sup> For black patients, consideration must be made as to which of the so-called step-one drugs should be chosen. According to the guidelines, a diuretic, beta adrenergic antagonist, calcium channel blocker, or angiotensin-converting enzyme inhibitor can be chosen. Many black patients respond less well to beta adrenergic antagonists unless a diuretic is added, than they do to certain calcium channel blockers used alone.<sup>35,36,37</sup>

In addition, a consideration must be made for the presence of left ventricular hypertrophy. While black patients have been classified as being low renin secretors<sup>5,13</sup> and, therefore, better responders to diuretic use, patients treated with a diuretic seem to have an increased prevalence of cardiovascular morbidity and mortality.<sup>38</sup> The assumption has been that the electrolyte imbalance and, particularly, the potassium and magnesium loss created by diuretics contribute to an increased susceptibility to cardiac arrhythmias.<sup>39</sup> Many black patients have been found to have left ventricular hypertrophy present at the time drug therapy is initiated.<sup>40,41</sup> Blacks have a high incidence of sudden cardiac death, presumably related to cardiac arrhythmias and possibly related to the high incidence of left ventricular hypertrophy that also contributes to the propensity toward these arrhythmias with or without electrolyte imbalance.<sup>42,43</sup> For this reason, the patient should be evaluated for the presence of left ventricular hypertrophy, which if present on the electrocardiogram, may be accepted as a definite clue to its existence; echocardiography is essential in questionable cases.

Non-potassium sparing diuretics as monotherapy should be avoided in patients with documented ventricular hypertrophy. The use of beta adrenergic antagonists is not totally excluded from the armamentarium in the black patient, particularly for those with mild hypertension who do not smoke<sup>44</sup> and who do not

have the additional risk of elevated serum cholesterol or of diabetes mellitus. Recent data showed that the response rate to monotherapy with beta blockers in black patients is between 57 percent and 58 percent, a level much better than previously thought.<sup>36</sup>

For those patients with moderately severe high blood pressure which is not being controlled with moderate doses of a single drug, the addition of a very low or low dose (12.5 mg or 25 mg) thiazide diuretic prior to moving on to another class of drugs may be helpful. Careful attention must be paid to the patient's electrolyte balance, particularly the potassium level. A potassium-sparing diuretic may be chosen in patients with adequate renal function who are not already receiving the potassium-sparing angiotensin-converting inhibitor class of antihypertensive drugs.

In considering the black patient with severe hypertension (diastolic blood pressure > 114 mm Hg), the basic strategy is reversed. It is usually necessary to initiate drug therapy at the first visit, and it is often prudent to start treatment with two drugs simultaneously, one frequently being a low dose diuretic. Many of these patients have significant renal impairment and will require use of the loop class of diuretics to control the volume-dependent component of their hypertension.

Many of the drugs in the stepped-care profile for initiating drug therapy have been tested in clinical trials for mild to moderate hypertension. In addition, the other classes of drugs including the alpha adrenergic agonists; vasodilators; or the combination alpha-beta adrenergic antagonist, labetalol, can be used. This latter drug has been shown to be quite efficacious in severe hypertension when given intravenously for hypertensive urgencies and when given orally for chronic control, particularly in black patients.<sup>45,46</sup>

For severe, refractory hypertension, minoxidil may be required but must be used along with a beta adrenergic antagonist and a loop diuretic to counter the reflex tachycardia and the sometimes profound fluid retention which can occur with this potent vasodilator. This drug can also be used in hypertensive urgencies but should always be initiated in very small doses. For outpatients, 2.5 mg or 5 mg per day can be the starting dose with close follow-up within one week. The dose can be slowly titrated upward until an adequate response is achieved or maximum dosage levels are reached. When considering use of this drug, the cosmetic side effect of hirsutism must be discussed with the patient.

An evaluation of possible secondary causes of hypertension can be based upon the basic laboratory values for electrolytes, particularly the serum potassium. This is important for patients who seem to be unresponsive to what should be adequate therapy. Of course, the noncompliant patient should always be excluded. (Although black patients have more hypertension, it should not be assumed that black patients *only* have essential hypertension.)

In summary, the strategy for treating black patients with hypertension is little different from that applied



to all patients. However, consideration must be given to the patient's lifestyle, the cultural differences in diet, and economic consideration.

## References

- Adams JM. Some racial differences in blood pressures and morbidity in groups of white and colored workmen. *Am J Med Sci* 1932;184:342-50.
- Voors AW, Foster TA, Frerichs RR et al. Studies of blood pressure in children, ages 5-14 years, in a total biracial community: The Bogalusa Heart Study. *Circulation* 1976;54:319-27.
- Prineas RJ, Gillum RF, Horibe H et al. The Minneapolis Children's Blood Pressure Study. I. Standards of measurement for children's blood pressure. *Hypertension* 1980;2(Suppl 1):18-24.
- Saunders E. Special techniques for management in blacks. In: Hall WD, Saunders E, Shulman NB (eds.) *Hypertension in Blacks: Epidemiology, Pathophysiology and Treatment*. Chicago: Year Book, 1985.
- Roberts J, Maurer K. National Center for Health Statistics: Blood Pressure Levels of Persons 6-74 Years, United States, 1971-1974. DHEW Pub HRA 78-1648. Vital and Health Statistics, series 11, no 203. Washington, DC: U.S. Government Printing Office, 1977:72.
- Hypertension detection and follow-up program cooperative group: Race, education, and prevalence of hypertension. *Am J Epidemiol* 1977; 106:351-61.
- Meyer P, Garay RP, Nazaret C et al. Inheritance of abnormal erythrocyte cation transport in essential hypertension. *Br Med J* 1981;282:1114-7.
- Woods KL, Beevers DG, West M. Familial abnormalities of erythrocyte cation transport in essential hypertension. *Br Med J* 1981;282:1186-8.
- Gillum RF. Pathophysiology of hypertension in blacks and whites: A review of the basis of racial blood pressure differences. *Hypertension* 1979;1:468-75.
- Boyle E Jr. Biological patterns in hypertension by race, sex, body height, and skin color. *JAMA* 1970;213:1637-1643.
- Keil JE. Skin color and education effects on blood pressure. *Am J Public Health* 1981;71:532-4.
- Tyroler HA and James SA. Blood pressure and skin color. *Am J Public Health* 1978;68:1170-2.
- Voors AW, Webber LS, Frerichs RR et al. Body height and body mass as determinants of basal blood pressure in children: The Bogalusa Heart Study. *Circulation* 1976;54:319-27.
- Warren SF, O'Connor DJ. Does a renal vasodilator system mediate racial differences in essential hypertension? *Am J Med* 1980;69:425-9.
- Voors AW et al. Racial differences in blood pressure control. *Science* 1979;204:1093.
- Lilley JL, Hsu L, Stone RA. Racial disparity of plasma volume in hypertensive man (letter). *Ann Intern Med* 1976;84:707-8.
- Canessa M, Adragna N, Solomon HS et al. Increased sodium-lithium countertransport in red cells of patients with essential hypertension. *N Engl J Med* 1980;302:772-6.
- Garay RP, Elghozi JL, Dagher G et al. Laboratory distinction between essential and secondary hypertension by measurement of erythrocyte cation fluxes. *N Engl J Med* 1980;302:769-71.
- Blaustein MP, Hamlyn JM. Role of a natriuretic factor in essential hypertension: An hypothesis. *Ann Intern Med* 1983;98(Suppl):785-92.
- Woods JW, Falk RJ, Pittman AW et al. Increased red-cell sodium-lithium countertransport in normotensive sons of hypertensive parents. *N Engl J Med* 1982;306:593-5.
- Grim CE, Luft FC, Miller JZ et al. Racial differences in blood pressure in Evans County, Georgia: Relationship to sodium and potassium intake and plasma renin activity. *J Chronic Dis* 1980;33:87-94.
- Langford HG. Dietary potassium and hypertension: Epidemiologic data. *Ann Intern Med* 1983;98:770-2.
- Walker WG, Whelton PK, Saito H et al. Relation between blood pressure and renin, renin substrate, angiotensin II, aldosterone, and urinary sodium and potassium in 574 ambulatory subjects. *Hypertension* 1979;1:287-91.
- Watson RL, Langford HG, Abernethy J et al. Urinary electrolytes, body weight and blood pressure. Pooled cross-sectional results among four groups of adolescent females. *Hypertension* 1980;2(Suppl 1):93-8.
- Anderson NB. Racial differences in stress induced cardiovascular reactivity and hypertension: Current status and substantive issues. *Psychol Bull* 1989;105:89-105.
- Haarburg E, Erfurt JC, Hauenstein LS et al. Socio-ecological stress, suppressed hostility, skin color, and black-white male blood pressure in Detroit. *Psychol Med* 1973;35:276-96.
- Oellet RP, Apostolides AY, Entwisle G et al. Estimated community impact of hypertension control in a high-risk population. *Am J Epidemiol* 1979;109:531-8.
- Tyroler HA, Heyden S, Hames CG. Weight and hypertension: Evans County studies of blacks and whites. In: Paul O (ed.), *Epidemiology and Control of Hypertension*. New York: Stratton Intercontinental, 1975:177-204.
- State of Maryland Demonstration of Statewide Coordination for the Control of High Blood Pressure: NHLBI contract 1-HV-2986, October 1977 - September 1983.
- Gillum RF and Gillum BS. Potential for control and prevention of essential hypertension in the black community. In: Matarazzo JD, Miller N (eds.), *Behavioral Health: A Handbook of Health Enhancement and Disease Prevention*. New York: John Wiley, 1984.
- MacMahon SW and Norton RN. Alcohol and Hypertension: Implications for prevention and treatment. *Ann Intern Med* 1986;105:124-5.
- Willett WC, Green A, Stamfer MJ et al. Relative and absolute excess risk of coronary heart disease among women who smoke cigarettes. *N Engl J Med* 1987;317(21):1303-9.
- Fielding JE. Smoking and women: Tragedy of the majority. Editorial. *N Engl J Med* 1987;317(21):1343.
- The 1988 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. *Arch Intern Med* 1988;148:1023-38.
- Cubbeddu LX, Aranda J, Singh B et al. A comparison of verapamil and propranolol for the initial treatment of hypertension. Racial differences in response. *JAMA* 1986;256:2214-21.
- Saunders E, Weir MR, Kong BW et al. A comparison of the efficacy and safety of a beta blocker, calcium channel blocker, and converting enzyme inhibitor in hypertensive blacks. *Arch Intern Med* 1990;150:1707-12.
- Freis ED, Materson BJ, and Flamenbaum W et al. Comparison of propranolol or hydrochlorothiazide alone for treatment of hypertension II: Evaluation of the renin-angiotensin system. *Am J Med* 1983;74:1029-41.
- Multiple risk factor intervention trial research group: Risk factor changes and mortality results. *JAMA* 1982;248:1465-77.
- Hollifield JW. Thiazide treatment of hypertension: Effect of thiazide diuretics on serum potassium, magnesium and ventricular ectopy. *Am J Med* 1986;80(Suppl. 4A):8-12.
- Multiple risk factor intervention trial research group: Baseline resting electrocardiographic abnormalities, antihypertensive treatment, and mortality in the multiple risk factor intervention trial. *Am J Cardiol* 1985;55:1-15.
- Hypertension Detection and Follow-up Program Cooperative Research Group. The effect of antihypertensive drug treatment on mortality in the presence of resting electrocardiographic abnormalities at baseline: The HDFP experience. *Circulation* 1984;70:996-1003.
- Leren P and Helgeland A. Coronary heart disease and treatment of hypertension: Some Oslo study data. *Am J Med* 1986;80(Suppl. 2A):3-6.
- Dunn FG, Oigman W, Sungaard-Riise K et al. Racial differences in cardiac adaptation to essential hypertension determined by echographic indexes. *JACC* 1983;5:1348-51.
- Savage DD, Drayer JM, Henry WL et al. Echocardiographic assessment of cardiac anatomy and function in hypertensive patients. *Circulation* 1979;59:623-32.
- Materson B, Reda D, Freis ED, Henderson WG. Cigarette smoking interferes with treatment of hypertension. *Arch Intern Med* 1988;148(10):2116-9.
- Flamenbaum W. Management of unique hypertensive situations: A focus on difficult, problematic, elderly black patients. *J Nat Med Assoc* 1987;79(Suppl):31.



# Enter the Eleventh Annual Med Chi Photo Contest

**Enter early!**

*Deadline for entries is April 19, 1991 ■  
Two categories: Black & White or Color ■  
Open to all Med Chi and Auxiliary Members*

■ *First and Second Prizes Awarded in Each Category* ■ *All Photographs will be displayed at the 1991 Annual Meeting at College Park.*

## *Med Chi Photo Contest Rules*

**Eligibility:** All members of the Faculty and members of the Auxiliary to the Medical and Chirurgical Faculty may enter. Professional photographers may not enter. Members of the Photo Contest Committee and their families are not eligible.

### *Contest Rules:*

1. Photographs may be submitted in two categories: black and white or color.
2. Limit: three entries per person.
3. Prints only, no smaller than 8 X 10 or larger than 11 X 14, will be accepted. If your favorite shot is a slide, you must have a print made to enter in the contest within these size ranges.
4. Entries must be matted or dry mounted. No framed photographs will be accepted.
5. Entries must have name, address, and telephone number attached to the back of each photograph.
6. Entries may be mailed or brought to the Faculty Office, 1211 Cathedral Street, Baltimore, Maryland 21201 by the close of the business day on April 19.
7. Photographs entered in the contest will be on display at the Annual Meeting in May of 1991.
8. Prizes will be awarded to the first and second place winners. Additional information about the prizes will be published in the Journal.
9. Winners will be announced at the Annual Meeting of the Medical and Chirurgical Faculty, May 8-11, 1991.
10. Photographs will not be mailed back. Photographs may be claimed at the exhibit area at the close of the Annual meeting at noon on May 11, or at the Faculty Building thereafter.
11. The Faculty does not guarantee against loss or damage of any kind to the photographs submitted to the contest.



---

# The Spectrum of Treatment for Coronary Artery Disease: Medical Regression to High-risk Angioplasty

---

Robert A. Vogel MD

---

*Dr. Vogel is Head of the Cardiology Division and is the Herbert Berger Professor of Medicine at the University of Maryland School of Medicine, Baltimore. Reprints: Robert Vogel MD, Cardiology Division, University of Maryland Hospital, 22 South Greene St., Baltimore, MD 21201.*

---

*During the past decade, the Division of Cardiology at the University of Maryland has played an active role in regression of coronary artery disease through cholesterol-lowering and high-risk coronary angioplasty.*

---

No field of medicine utilizes a wider range of diagnostic and therapeutic methods than the management of coronary artery disease. Diagnostic tests include electrocardiography, echocardiography, nuclear scintigraphy, and coronary arteriography. Current therapies range from the management of the risk factors of hypertension, tobacco, and hypercholesterolemia to coronary angioplasty, bypass surgery, and cardiac transplantation. During the past decade, considerable clinical interest has developed in two areas at opposite ends of the spectrum: regression of coronary artery disease through cholesterol-lowering and high-risk coronary angioplasty. The Division of Cardiology at the University of Maryland has played an active role in both of these areas.

## Regression of Coronary Artery Disease

Having either felt the hardness of coronary atherosclerosis at the time of bypass surgery or studied its fibrotic and calcified appearance histologically, it is hard to imagine that any form of medical therapy could cause regression of clinically significant plaques. In contrast to these impressions, increasing numbers of studies are demonstrating that significant cholesterol reduction can cause regression of angiographically-documented coronary stenoses as severe as 75 percent diameter reduction. Indirect evidence comes from several clinical investigations. Epidemiological studies have found that coronary artery disease is only one-tenth as prevalent in Japan, where the mean serum cholesterol is 160 mg/dl, as it is in England and Finland where the mean cholesterol value is 250 mg/dl. In this country, coronary heart disease mortality is four times as likely in patients with cholesterol levels of 300 mg/dl as it is in patients with cholesterol levels of 200 mg/dl. Prospective randomized trials have shown that both the reduction of elevated low-density lipoprotein cholesterol and the elevation of reduced high-density lipoprotein cholesterol decrease the incidence of myocardial infarction, the need for bypass surgery, and heart disease mortality. These findings have led to a reassessment

of the upper limits for normal values, which are now 200 mg/dl for total cholesterol and 160 mg/dl for low-density lipoprotein (LDL) cholesterol. An even lower LDL value of 130 mg/dl is recommended for individuals with demonstrated coronary heart disease or multiple cardiac risk factors.

Despite its pathological appearance, it has been well-established that coronary atherosclerotic plaques are dynamic lesions which increase in severity in an irregular fashion. Plaque rupture and ensuing thrombosis leads to the acute coronary disease syndromes of unstable angina and myocardial infarction. Prior to recent studies, documented regression of coronary artery disease was rarely observed.

Early investigations of coronary disease regression utilized conservative medical management regimens which reduced total cholesterol to the 250 mg/dl to 300 mg/dl range. In such studies, angiographically-documented coronary disease regression was observed in only approximately 4 percent of patients.

Subsequent investigations utilized more aggressive means for lowering cholesterol, such as ileal bypass surgery, plasma apheresis, and the new HMG (hydroxyl-methyl-glutaryl) CoA (coenzyme A) reductase enzyme inhibitors. Investigators at the University of Minnesota have reported that cholesterol-lowering (420 mg/dl to 220 mg/dl) resulted in definite or probable regression of coronary disease in about 10 percent of patients. Cholesterol values have been reduced by more than 50 percent at Hammersmith Hospital using plasma apheresis exchange. Precise quantitative coronary arteriography has demonstrated that coronary lesions of up to 75 percent regress 20 to 30 percent within one year in patients treated with plasma apheresis. Unfortunately, little or no regression of very severe stenoses was found. Overall, 40 percent of patients undergoing plasma apheresis experienced coronary disease regression.

Maximal lipid-lowering of this extent can also be achieved using less expensive and less invasive approaches. Ornish and coworkers have reported reductions in total and low-density lipoprotein cholesterol of more than 50 percent using strict diet, smoking cessation, and exercise. At the end of one year, patients utilizing this lifestyle modification program had significant reductions in angiographic, coronary-artery-stenosis severity compared with controls. Additionally, coronary flow reserve, measured by positron emission tomography, improved in the treated group but worsened in the control group. Blankenhorn and coworkers have reported similar findings in patients undergoing coronary bypass surgery. Cholesterol-lowering from 240 mg/dl to 180 mg/dl resulted in an incidence of regression of coronary disease of 16 percent in medically treated patients versus 2 percent in controls. These data suggest that coronary disease regression can frequently be achieved in patients whose total cholesterol and LDL cholesterol are reduced below 150 mg/dl and 100 mg/dl, respectively.

The National Institutes of Health (NIH) has recent-

ly begun a multicenter trial of bypass patients whose mean cholesterol will be reduced to 80 mg/dl. Although no data are yet available from this study, considerable enthusiasm exists that maximal lipid reduction will play an important role in the maintenance of vein-graft patency. A similar study is currently underway at the University of Maryland; this nonrandomized trial utilizes combined cholestyramine and lovastatin therapy to achieve maximal lipid-lowering. Coronary-stenosis regression is being monitored by the Cardiology Division's internationally recognized quantitative arteriography laboratory at an interval of three years. This facility is the core angiographic laboratory for the National Heart, Lung and Blood Institute's Angioplasty Registry, and the Veterans Administration's Cooperative Trial of Angioplasty versus Medical Therapy. Precise, computerized, automated edge detection of coronary stenoses is used to provide objective assessment. Enrollment of patients with partly or totally uncorrectable coronary disease is currently underway. The University of Maryland's and NIH's regression studies are but two of the estimated twenty-five trials whose results will be reported in the next decade. The likely documentation of regression of coronary disease will make lipid reduction as important for those with demonstrated atherosclerosis as it has already become for asymptomatic individuals wishing to prevent it.

### **High-risk Angioplasty Using Cardiopulmonary Bypass**

Although first envisioned as a treatment for patients with single vessel disease and relatively normal left ventricular function, coronary angioplasty has been more recently used for those with advanced and acute coronary disease. These widening applications for coronary angioplasty have paralleled the technological developments of laser and atherectomy catheters, stents, and coronary and peripheral circulation support systems. The Division of Cardiology at the University of Maryland introduced the concept of prophylactic, total circulatory support for high-risk angioplasty in December 1987. To circumvent the potential problems of hemodynamic collapse during balloon occlusion or following vessel closure, the Division began to use a percutaneous cardiopulmonary bypass system which provides full, systemic, circulatory support initiated prior to angioplasty; this technique was termed "supported angioplasty." Supported angioplasty is performed in the catheterization laboratory using only local anesthesia by a team composed of two cardiologists, a cardiac anesthesiologist, and a perfusionist. Percutaneous 18-20F cannula insertion is performed using standard Seldinger technique. The portable heart-lung machine uses a centrifugal pump placed proximal to a membrane oxygenator. In this configuration, blood is actively aspirated through a multi-holed cannula positioned in the right atrium, through the pump and oxygenator,



and returned to the iliac artery. This system differs from operating room heart-lung machines in its direct connection of the pump to the afferent venous line, allowing operation using cannulas which can be placed percutaneously. In contrast to the intra-aortic balloon pump, this approach provides cardiopulmonary bypass of up to 5/min, independent of cardiac rate and output. Owing to the full circulatory support, this approach makes possible prolonged balloon inflations and dilatations of critical coronary vessels. Chest pain rarely occurs during balloon inflation, and its occurrence can usually be managed by increasing pump output. Following angioplasty, cardiopulmonary bypass is tapered off and cannulas are removed using either surgical closure or percutaneous removal. The latter is accomplished using a mechanical groin clamp starting approximately five hours after termination of the procedure. Patients suffering acute vessel closure can be taken to the operating room hemodynamically stable.

Shortly after introducing this new procedure, the Division of Cardiology formed a National Registry of what is now twenty-one centers performing elective supported angioplasty to tabulate initial experiences with high-risk patients. During 1988, 105 patients (mean age: sixty-two years) with indications of severe or unstable chest pain, at least one dilatable stenosis, and ejection fractions less than 25 percent or target vessels supplying greater than half the remaining viable myocardium, underwent supported angioplasty. This group included twenty patients whose disease was deemed too severe to undergo bypass surgery and thirty patients who had dilatation of their only patent coronary vessel. Seventeen patients had left main coronary stenosis, fifteen of whom underwent dilatation of that vessel.

A high angioplasty success rate (95 percent) was achieved for the group that underwent an average of 1.7 dilatations per patient. Symptomatic improvement, defined as lessening of New York Heart Association (NYHA) chest pain classification of at least two classes, was reported by 91 percent of the patients. The overall hospital mortality of 7.6 percent was almost exclusively due to poor outcomes in patients older than seventy-five years with left main coronary artery stenosis. The remaining seventy-six patients had a hospital mortality of 2.6 percent. In the three specific subgroups considered at highest risk -- those with dilatation of their only patent coronary vessel, those deemed inoperable using bypass surgery, and those with ejection fractions less than 25 percent -- hospital mortality ranged from 0 to 7 percent. These findings suggest that supported angioplasty can be performed in high-risk patients other than elderly individuals with left main coronary artery stenosis with the expectation of excellent symptomatic improvement and short-term survival.

The initial National Registry data, however, did not fully define the specific subgroups requiring full circulatory support. The Division of Cardiology at the

University of Maryland is currently utilizing standby cardiopulmonary support in a fashion allowing rapid initiation of cardiopulmonary bypass in patients developing hemodynamic instability. This approach, termed "standby supported angioplasty," has been used recently in many patients previously provided with prophylactic support. Emergency initiation of support in the standby situation has been required in a minority of incidences to date, but has been performed successfully even during cardiac arrest. At the present time, prophylactic support is being utilized only for patients undergoing dilatation of their only patent coronary vessel or for those who develop hemodynamic instability during coronary artery intervention.

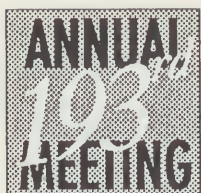
In addition to percutaneous femoral artery bypass, other approaches to supporting the systemic and coronary circulations during high-risk angioplasty are currently under development. Approaches providing systemic perfusion include the transaortic valve turbine pump (hemopump), and the percutaneous left ventricular assist provided through transseptal access to the left atrium. Neither of these systemic support approaches, however, provide direct myocardial perfusion during balloon inflation. Examples of those that do include the autoperfusion balloon catheter, antegrade pump perfusion using either blood or fluosol, and retrograde coronary sinus perfusion. The Division of Cardiology currently has a unique system under development which allows near full left ventricular bypass support to be performed using a single double-lumen catheter placed retrograde across the aortic valve. Unlike cardiopulmonary bypass, this approach can provide prolonged support of the systemic circulation. Concepts of supported and standby supported angioplasty, and associated evolving technologies now permit balloon and other interventional procedures to be safely accomplished in even the most high-risk individuals.

Clearly, the accelerating progress of heart disease research suggests that we will soon be able to both prevent much of coronary heart disease as well as to manage effectively those who suffer from its most advanced forms. ■

### **The perfect setting for parties or parliamentary procedures.**

*Located across the street from the Meyerhoff and a block from the Lyric, Med Chi has a space to accomodate your next social or business group gathering.*

*For information, contact Convention Services at 539-0872, from the Baltimore area, or at 1-800-492-1056, from other Maryland locations.*



*Medical and Chirurgical Faculty of Maryland*

## ***American Medicine Today: Perspectives from Maryland***

Wednesday, May 8 - Saturday, May 11, 1991  
at the University of Maryland,  
University College Center of Adult Education,  
College Park, Maryland

Featuring:

**Nationally Recognized Speakers**

**Guest Panelists**

**Legislative Affairs**

**15 Hours of AMA Category 1 CME Credits**

**Evening Events**

**Over 100 Exhibitors**

---

193rd Annual Meeting - *American Medicine Today: Perspectives from Maryland*, May 8-11, 1991

### **Meeting Registration**

- |  |          |           |
|--|----------|-----------|
| <input type="checkbox"/> Member of Med Chi   |          | No Charge |
| <input type="checkbox"/> Non Med Chi Member (check category that applies)  |          |           |
| <input type="checkbox"/> Registering for entire meeting  | \$225.00 | \$ _____  |
| <input type="checkbox"/> Limited credit hours (\$25.00/credit hour)  |          | \$ _____  |
| <input type="checkbox"/> Residents and Students  | \$30.00  | \$ _____  |
| <input type="checkbox"/> Apply this fee to my first year's dues.   |          |           |
| <input type="checkbox"/> I would like accommodation information. (Accommodations available at the Center of Adult Education) |          |           |

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Component Society: \_\_\_\_\_

Payment enclosed: ☐ check payable to Med Chi

☐ Mastercard ☐ Visa      Credit Card No. \_\_\_\_\_

Return Registration to: Convention Department, 1211 Cathedral St., Baltimore, MD 21201

---



# PRELIMINARY SCHEDULE

## American Medicine Today: Perspectives from Maryland

May 1991

**8**

Wednesday

Registration  
General Business Session  
Council Meeting  
House of Delegates Meeting  
General Membership Meeting  
**Keynote Presentation** - John Tupper, M.D., President AMA  
Auxiliary Luncheons/Business Meeting  
Plenary Session - Guest Speaker  
**Scientific Sessions** sponsored by:  
Maryland Vascular Institute  
Exhibitors' Sweepstakes Drawing/Exhibitors' Reception (casual attire)  
Evening Entertainment

**9**

Thursday

Prayer Breakfast  
**Scientific Sessions** sponsored by:  
American Heart Association, Maryland Affiliate, Inc.  
Med Chi Long-term Care & Geriatrics Committee and the Alzheimers Association of Central Maryland  
Med Chi and the Department of Family Medicine, University of Maryland  
Maryland Society of Eye Physicians and Surgeons  
Maryland Asthma and Allergy Society  
Med Chi Committee on Professional Ethics  
Maryland Commission on High Blood Pressure & Related Cardiovascular Risk Factors  
Med Chi Music Medicine Clearinghouse Committee  
Med Chi Committee on Physician Rehabilitation  
Maryland Society of Anesthesiology  
**Keynote Presentation** - Senator John D. Rockefeller IV of West Virginia  
Exhibitors' Sweepstakes Drawing  
Auxiliary Business Meeting/AMA-ERF Auction/Luncheon  
Plenary Session - Guest Speaker  
Reception - Dinner Optional

**10**

Friday

General Breakfast Session  
**Keynote Presentation**  
**Scientific Sessions** sponsored by:  
Medical Mutual Liability Insurance of Maryland  
Maryland Dermatological Society  
Maryland Society for the Rheumatic Diseases and the Maryland Arthritis Foundation  
Maryland Psychiatric Society, Inc.  
Maryland Academy of Family Physicians and Maryland AIDS Professional Education Center  
Exhibitors' Sweepstakes Drawing  
Plenary Session - Guest Speaker  
Closing Business Session  
Annual Presidential Banquet honoring Reynaldo L. Lee-Llacer, M.D. (Reservation required - Black Tie optional)

**11**

Saturday

Events to be announced.

Complimentary refreshments will be available throughout each day. In addition, a box lunch will be provided in the exhibit halls. **This Preliminary Schedule is subject to change.**

## Auxiliary

### Maryland Wins Again at Southern Medical

As Vice Councilor for the Southern Medical Association Auxiliary (SMAA), it was my responsibility to prepare an exhibit on *Medical Heritage* for the Annual Convention in Nashville. Janet Campbell, the 1989-1990 president of SMAA, suggested that an auxiliary member prepare an exhibit on Walter Edward Dandy MD, her doctor from her hometown of Sedalia, Missouri. Since he was a world-renowned physician from Hopkins, it seemed to be a perfect project for Maryland, and with the assistance of two willing auxiliary members, the research was begun.

Walter Edward Dandy was born in Sedalia, Missouri in 1881. His early years were spent in Sedalia, after which he attended the University of Missouri where he excelled academically. He consulted with Sir William Osler about the prospect of studying at Oxford University; Dr. Osler advised him to finish his medical studies at Johns Hopkins. He graduated from Johns Hopkins Medical School in 1910.

In 1918, at the age of thirty-two, Dr. Dandy used ventriculography on twenty children with hydrocephalus. This study started him on the road to medical fame. Dr. Dandy ultimately became a major figure in the Golden Age of Surgery at Hopkins. In addition to being a neurosurgical genius, he was a highly revered teacher and writer. He wrote five books between 1933 and 1945 but felt his crowning work was *Surgery of the Brain*, a monograph of 600 pages which is currently in Lewis' *Practice of Surgery*.

Dr. Dandy inspired his residents to be superb technicians, as well as servants to their patients. While his residents were in constant fear of him, they were also devoted to him. Being a great baseball fan, he took his interns and residents to see the Baltimore Orioles once a year. (It is rumored that his "guests" received hot dogs according to rank -- the residents were each given two, but the interns only one.)

After learning that a player was injured by a pitched ball, Dr. Dandy began working on the idea of a protective batting cap. His design was eventually patented on November 9, 1943, and was produced by A. G. Spaulding and Bros. One of Dr. Dandy's protective caps is now on exhibit at the Baseball Hall of Fame in Cooperstown, New York.

When researching this project, we had the opportunity to meet with Mrs. Sadie Dandy, widow of Dr. Walter E. Dandy. She graciously told us about her life with Dr. Dandy and their family, and showed us memorabilia of his career and travels. The medical tradition continues in the family through Walter Edward Dandy, Jr. MD. We also had the good fortune to meet Walter Edward Dandy, IV, age six weeks. His father loaned us a copy of the patent for the protective baseball cap which became part of our exhibit. (We look forward to our next meeting with Mrs. Dandy on the occasion of her ninetieth birthday.)

This interesting research, coupled with meeting Mrs. Dandy, resulted in an exhibit that won for Maryland, the Second Best State Medical Heritage Award.

CHING BARRETTO with MILDRED TAYLOR and BETTYMOLZ

JOSIE FIGUEROA, President

Auxiliary to the Medical and Chirurgical Faculty of Maryland ■

Serving on the Southern Medical Association Auxiliary Board from Maryland are Mildred Taylor, Northern Regional Vice President and Doctors' Day Postal Plate Chairperson; Mary Skipton, Councilor; and Ching Barretto, Vice Councilor.



Figure 1. (L to R) Betty Molz, Sadie Dandy, and Ching Barretto outside Dr. Dandy's home.



Figure 2. Mildred Taylor and Ching Barretto visit Sadie Dandy (seated)



### Tips about Handling Insulin

*Doctor: I read a Letter to the Editor in Diabetes Forecast recently in which the mother of a diabetic child carried insulin in an insulated bag along with Dry Ice when traveling. Is such a precaution necessary to preserve the potency of insulin? How should I handle insulin when traveling?*

All preparations of insulin are required by law to bear the instruction: "Keep in a cold place--avoid freezing." This is a requirement of the Food and Drug Administration (FDA) concerning the storage of insulin. For this reason, the recommendations concerning proper storage, and the time that the patient has the vial in use (expiration date) are separated. Each of the single insulins, such as Regular, NPH, Semilente®, Lente®, Ultralente®, and Protamine Zinc are stable up to two years at room temperature (70 to 77 degrees F.).

Modification of the legend would not increase the sale of insulin so the pharmaceutical industry has no interest in applying to the FDA for a change. The FDA does nothing unless someone requests that it be done. So, the labeling remains the same decade after decade. If there is a profitable market for the gadgets, one cannot blame a manufacturer for producing insulated bags and other items unnecessary for the management of diabetes.

Experienced diabetic patients have known for years how to lessen the expense and inconvenience of managing diabetes. A vial of U-100 insulin contains 1000 units and usually has an expiration date of eighteen months or more from the date of purchase. If a patient takes thirty units in the a.m. and twenty units in the p.m., for a total daily dose of fifty units, a vial would last twenty days assuming there is no loss in the syringe. If it is more economical to buy in ten-vial packages, this patient could do so safely (a seven-month supply).

Insulin vials should be stored on the open shelf of a refrigerator (45 to 50 degrees F.). When a new vial is placed in use, it can be kept in the medicine cabinet, on a kitchen shelf, or wherever it is convenient, until all of the contents are consumed. Most hospitals no longer

require that insulin dispensed for hospital patients be kept under refrigeration. Injected insulin at room temperature produces less discomfort than cold insulin.

If a patient plans to go away for a few days, the vial can be placed in a coat pocket, a purse, or an attaché case and kept with the other insulin supplies. There is no danger of damage to the insulin as long as it is not placed in a location which might get very hot or very cold, such as the trunk of a car. Insulin should not be checked in with airplane luggage because the exposure is uncertain and sometimes luggage is lost or delayed in transit. There is no need to purchase an insulated container to carry insulin, and certainly no need for Dry Ice. If insulin were to be placed in contact with Dry Ice, the contents might be frozen and damaged as far as useability and potency are concerned. If a trip takes several months, a patient could carry all of the insulin and supplies in this manner. However, if household refrigeration is available en route, it should be utilized.

All vials of insulin should be checked for a long expiration date at the time of purchase and examined for evidence of particles adhering to the walls of the vials. If particles are noted adhering to the wall of a vial, it should be called to the attention of the dispensing clerk or pharmacist and exchanged for another vial. The most common grossly identifiable finding in previously frozen or damaged insulin is the adherence of particles to the wall of the vial.

Before withdrawal of cloudy insulin (NPH, Lente®, Protamine Zinc, etc.), the vial should be rotated well to insure even distribution of the particles in the suspension. Shaking a vial of insulin will cause suds or foam to develop, and the particle distribution in the fluid will be uneven. Should it occur, the vial can be set aside for a while and the foam will gradually disappear. Lastly, patients should be advised never to change types, concentration, or manufacturers of insulin without first discussing it with their physician.

DeWITTE E. DeLAWTER MD  
Editor

### Hotline Numbers for Impaired Professionals

Physicians -- 727-0120

Dentists -- 964-2275

Attorneys -- 685-7878

Pharmacists -- 727-0746

Emergency Psychiatric Beds  
800-492-0610

### A CLINICAL MOMENT WITH...

Physicians in all specialties are invited to submit synopses of current clinical problems in a question and answer format.

Write: **A Clinical Moment With...**

*Maryland Medical Journal*

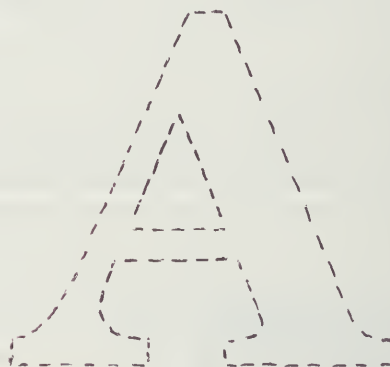
**1211 Cathedral Street**

**Baltimore, MD 21201-5585**

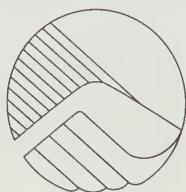


## If these are your Questions:

What is meant by impairment?  
When considering self-disclosure,  
what issues should be taken into account?  
How will others react to my  
self-disclosure?  
Should I tell my colleagues?  
What should I tell my patients?  
What should I say on applications for  
privileges, licensing, etc.?



## The Physician Rehabilitation Committee Has the Answers



For a free copy of "To Disclose or Not to Disclose," a brochure of questions and answers on the topic of self-disclosure for the physician recovering from impairment or illness, published by the Physician Rehabilitation Committee of the Medical and Chirurgical Faculty of Maryland as a service to all Maryland physicians, members and non-members, write to Med Chi, Physician Rehabilitation Committee, 1211 Cathedral Street, Baltimore, MD 21201 or call (301) 539-0872 or in MD 800-492-1056.

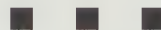


Mary Betty Stevens MD, Chairperson of the Medical Advisory Board of the Maryland Lupus Foundation, recently received the 1990 Baltimore City Medical Society (BCMS) Community Service Award. This award is presented annually to a member of the Society in recognition of outstanding community service. Dr. Stevens was nominated by the Maryland Lupus Foundation for her contributions in founding the organization and serving as chairperson of its medical advisory board since 1983. Through her dedication, the organization has grown to 2,000 members supporting over 4,900 lupus patients, and their family and friends.

In presenting the award, Dr. Susan Guarnieri, President of BCMS, stated, "Dr. Stevens serves as an example to us all of the blend of research, clinical practice, and community service that exemplifies the goals of the medical profession."

A 1960 graduate of Johns Hopkins, she is currently Professor of Medicine in the Johns Hopkins University Medical School, and Director of the Division of Rheumatology, Good Samaritan Hospital. Dr. Stevens is a Fellow of the American College of Physicians; a member of four medical journal editorial boards; and a consultant to the Social Security Administration, the Maryland State Commission on Arthritis and Related Diseases, the Rheumatology Division Program in Mount Sinai, NY, and the Residency Review Committee for Internal Medicine.

In addition to having written or contributed to hundreds of scientific articles and book chapters, she has received several awards for her ability in clinical teaching.



Keith Falcao MD

Keith Falcao MD has been appointed Chief of the Section of Endoscopic Surgery at St. Agnes Hospital; this is a new section within the hospital's Department of Surgery. As Chief, Dr. Falcao recently announced a revolutionary treatment for gallbladder disease, laparoscopic cholecystectomy, which has been implemented at St. Agnes.

Dr. Falcao received his undergraduate and doctor of medicine degrees from Dow Medical College in Pakistan. He served a rotating internship in Toronto, Canada; a general surgery residency at New York Medical College in New York, NY; and completed his surgical residency at St. Agnes Hospital. He is certified by the American Board of Surgeons and is a Fellow of the American College of Surgeons.



### When it's time to send in The Special Team.

Here at PSA Financial Center, we utilize a team approach to financial problem solving, and we put together special teams as they are required to deal with special situations.

PSA Professional Liability, Inc., for example, specializes in Medical Malpractice Insurance. Our associates can call upon both in-house staff and outside specialists for their expertise when needed. And because our clients have confidence in our special teams, PSA Professional Liability is now among the largest Malpractice Insurance Agencies in Maryland.

Contact any of our affiliates to enjoy the satisfaction that comes from having a team of financial service specialists working for you.

PSA Professional Liability, Inc.  
Malpractice Insurance



PSA Capital Management, Inc.  
Investment Management

PSA Financial Advisors, Inc.  
Financial Planning

PSA Financial Center

PSA Pension Services, Inc.  
Design & Administration

PSA Financial, Inc.  
Employee Benefits

North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

PSA Insurance, Inc.  
Agents & Brokers

PSA Equities, Inc.  
Broker / Dealer

PLANNING FOR OUR CLIENTS FINANCIAL FUTURE  
SINCE 1923

## LETTERS TO THE EDITOR LETTERS TO

I would like to commend the *Journal* for publishing the excellent article on venomous snakebites by Drs. Gold and Barish in the September 1990 issue. It was of great help to me in preparing my column on the subject for the November 20, 1990 issue of the *Baltimore Sun*. My thanks to the *Journal* and the authors.

SIMEON MARGOLIS MD

The Johns Hopkins University School of Medicine  
Baltimore

# *The Dual Diagnosis Treatment Program of Sheppard Pratt*

Patients with psychiatric illness and drug or alcohol problems present complex diagnostic and treatment challenges.

Sheppard Pratt's inpatient units are designed and staffed specifically for the treatment of these complicated patients.

We provide:

- ☐ Comprehensive psychiatric and chemical dependence evaluation;
- ☐ Specialized programs for patients with affective disorders, anxiety disorders, schizophrenia and learning disorders;
- ☐ Psychopharmacological evaluation and treatment;
- ☐ Specialized programming for the gerontological patient who is chemically dependent;
- ☐ Addiction education for the psychiatric patient who is resistant to treatment for chemical dependence; and
- ☐ On site Double Trouble, AA and NA meetings.

Founded in 1853, Sheppard Pratt is a 322-bed private, not-for-profit psychiatric hospital that provides comprehensive diagnostic and treatment services for short, intermediate or long term patients as well as outpatient and partial hospitalization care.

For more information about Sheppard Pratt's approach to the dually diagnosed patient, or to make a referral, contact the Adult Admissions Office at:

(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ *Sheppard Pratt*  
A not-for-profit health system



# Where there's smoke...there may be bronchitis



"Recent research has delineated early, more subtle changes in lung and immune functions. These alterations directly predispose smokers to respiratory tract infection."

*Am Fam Phys* 1987;36:133-140

**Ceclor<sup>®</sup>**  
cefactor  
Pivules<sup>®</sup>  
250 mg

**Established therapy  
for today's patients**

For respiratory tract infections due to susceptible strains of indicated organisms

#### Brief Summary.

Consult the package literature for prescribing information. Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A  $\beta$ -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

#### Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

#### Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon.

Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonía, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

Abnormalities in laboratory results of uncertain etiology:

- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest<sup>®</sup> tablets but not with Tes-Tape<sup>®</sup> (glucose enzymatic test strip, Lilly).

PA 8791 AMP (021490 LRI)  
Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

**Lilly**

Eli Lilly Industries, Inc.  
Carolina, Puerto Rico 00630  
A Subsidiary of Eli Lilly and Company  
Indianapolis, Indiana 46285

CR-0525-B-049333 © 1990, ELI LILLY AND COMPANY



THE JOHNS  
HOPKINS  
MEDICAL  
INSTITUTIONS

All courses at the Turner Auditorium unless otherwise indicated. For information on sponsored Continued Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

March-April	<b>32nd Postgraduate Institute for Pathologists in Clinical Cytopathology</b> for Board Certified (or qualified) pathologists as a subspecialty residency. 152 Cat 1 AMA/PRA credits in two courses, both of which must be taken. Application and preregistration are advised ASAP; preregistration must be completed before March 15 unless by special arrangement. Info: J. Frost MD or B. Remley, 111 Pathology Building, The Johns Hopkins Hospital, Baltimore, MD 21205 USA (301-955-8594).
March-April	<b>Home Study Course A</b> , personal reading and microscopic study at own lab in preparation for Course B. Course A materials will be sent to each participant within the U.S. and Canada for home study. Participants <i>outside</i> the U.S. and Canada must make arrangements to study Course A before Course B.
April 14-April 25	<b>In-Residence Course B</b> , lecture series, laboratory, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore, MD. <i>The entire course is given in English.</i>
March 4-5	<b>Man-made Mineral Fibers: Status of Health Risk Assessment.</b> Info: Dr. Jacqueline Corn, 301-955-2609.
March 14-16	<b>Brain Chemistry and Behavior: Advances in PET and SPECT Imaging.</b> 18 Cat 1 AMA/PRA credits. Fee: \$440 physicians; \$340 residents. Info: Patty Campbell 301-955-3839 or Julia Buchanan 301-955-8582.
March 18-20	<b>Spectrum of Developmental Disabilities: Cerebral Palsy - Clinical and Research Issues.</b> 20 Cat 1 AMA/PRA credits. Fee: \$425. Info: 301-955-2959.
March 21-22	<b>Clinical Care of the Patient with HIV Infection.</b> 14 Cat 1 AMA/PRA credits. Fee: \$300 physicians; \$150 residents. Info: 301-955-2959.
March 21-23	<b>Fifth National Conference on Student Mental Health: Just Say Yes to the Mental Health Challenges of the 1990s</b> , at the Homewood Campus. Credits to be determined. Fee: \$225; \$125 professional-in-training; \$200 (3 or more attending from same institution). Info: 301-955-2959.
March 22-23	<b>Phototherapy and Photochemotherapy: An Update for the '90s</b> at the Harbor Court Hotel, Baltimore, MD. 11 Cat 1 AMA/PRA credits; 10 AAD Cat 1 credits. Fee: \$250 physicians; \$200 nurses and technicians; \$150 residents and fellows.
April 5-6	<b>Perspectives in Clinical Nutrition.</b> 11 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents and allied health professionals. Info: 301-955-2959.
April 8-13	<b>18th Annual Pediatric Trends.</b> 45 Cat 1 AMA/PRA credits, 45 PREP. Fee: \$575 physicians; \$425 residents and fellows. Info: 301-955-2959.
April 10-12	<b>Topics in Ambulatory Medicine V</b> at the Harbor Court Hotel, Baltimore, MD. 16 Cat 1 AMA/PRA credits. Fee: to be announced. Info: 301-955-2959
April 11-13	<b>J. Donald Woodruff Symposium on Gynecologic Oncology</b> , at the Hyatt Regency Inner Harbor, Baltimore, MD. Cat 1 AMA/PRA credits will be awarded. Fee: \$375 lectures and labs; \$300 lectures only; reduced fees for residents. Info: 301-955-2959.
April 15-17	<b>Toxicology Update '91: Concepts and Advances in Immunotoxicology.</b> Info: Catherine Walsh, 301-955-2609.
April 17	<b>Fifth Annual Mood Disorders Symposium.</b> Cat AMA/PRA credit available. Fee: \$35 DRADA members; \$45 others. Info: 301-955-2959.
April 19	<b>Thyroid Update 1991.</b> 7.5 Cat 1 AMA/PRA credits. Fee: \$150. Info: 301-955-2959.
April 25-27	<b>Advances in Hip and Knee Arthroplasty</b> at the Fort Magruder Inn Conference Center, Williamsburg, VA. 18 Cat 1 AMA/PRA credits. Fee: \$575 physicians; \$350 residents and fellows. Info: 301-955-2959.



THE JOHNS HOPKINS  
MEDICAL  
INSTITUTIONS  
(continued)

- May 16-17** **Pediatric Allergy and Immunology for the Practitioner.** AMA/PRA credits pending. Fee: \$195. Info: 301-955-2959.
- June 3-14** **The Fourth Annual Summer Institute in Environmental Health Studies.** Info: Dr. Jacqueline Corn, 301-955-2609.
- June 10-12** **Advanced Pediatric Life Support Courses.** 20 Cat 1 AMA/PRA credits; 20 AAP PREP credit hours. Fee: \$495. Info: 301-955-2959.
- June 13-14** **Design and Analysis Issues in Clinical Trials.** 14.5 Cat 1 AMA/PRA credits. Fee: to be announced. Info: 301-955-2959.
- 
- Continuously Throughout the Year** **Visiting Preceptorship in Pediatric Critical Care Medicine.** Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. Info: 301-955-2959.
- Ophthalmic Electrophysiology Technician Training Course.** Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. Info: C. Kearney 301-955-2959.
- The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.
- Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.
- Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics/year in 5 bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.
- Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.

### Information for Authors

Manuscripts may be sent to Editor, **MMJ**, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

#### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

Include full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles.

Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in **MMJ** is protected by copyright and may not be reproduced without the written permission of both the principal author and **MMJ**.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.

## UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

**March 13-15**

**6th National Traumatic Brain Injury Symposium**, sponsored by the Maryland Institute for Emergency Medical Services Systems, at the UMAB campus. Fee: \$199. Info: Roberta Schwartz 301-328-6101/2478.

**March 21**

**Dean's Conference Number 5: Health Issues for Men and Women**, at the UMAB Campus, Medical School Teaching Facility. 6 Cat 1 AMA/PRA credits. Fee: \$35.

**March 21-23**

**The R.A. Crowley 13th Annual National Trauma Symposium**, at the Baltimore Convention Center, Baltimore, MD. 21 Cat 1 AMA/PRA credits. Fee: \$425. Info: 301-328-5537.

**April 22-23**

**Infectious Diseases in Everyday Medicine**, at the Baltimore Convention Center, Baltimore, MD. 12 Cat 1 AMA/PRA credits; 12 AAFP prescribed hours; 12 ACEP credit hours. Fee: \$125.

**April 25**

**Dean's Conference Number 6: Clinical Medicine for the Community Physician; Topics in OB/GYN and Pediatrics**, at Washington County Hospital, Hagerstown, MD. 3 Cat 1 AMA/PRA credits; 3 AAFP prescribed hours. Fee: \$35.

**May 2-5**

**4th Annual Trauma Anesthesia and Critical Care Symposium**, at the Hyatt Regency, Baltimore, MD. 25 Cat 1 AMA/PRA credits. Fee: \$550 physicians. Info: 301-328-2628.

**Continuously  
Throughout the Year**

**University of Maryland Dean's Conferences** - Held monthly, October through April. Designed for the family/general practitioner and internist. Each conference highlights different clinical departments placing emphasis on the practical methods being used and researched at the University of Maryland. Extension programs are being planned to complement the programs held on the University's Baltimore campus.

**Visiting Professor Program** - A directory of speakers and their topics is available to area hospitals and other health care organizations. No administrative fees are charged for this service. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunities for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Hour-for-hour Cat 1 AMA/PRA credits available. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.

## RIVA BAY OFFICE PROPERTIES, INC.

**GRAND OPENING MARCH 1ST 1991 • CUSTOM FINISHED MEDICAL SUITES**

**A NEW concept in Medical Office Space**

**Prime, Prestigious Location** - Convenient to Baltimore, Washington and Anne Arundel Medical Center

**Turn Key Operation** - Custom Medical Suites finished for medical practice use

*Ample Free Parking; Janitorial Service Included; Receptionist, Spacious Central Waiting Area;  
Court Yard; Signage; Option of On-Site Radiology and On-Site Laboratory*

**40% Preleased!**

For more information and a personal tour, please call Dr. Robert Marine or Susan Best  
2525 Riva Road, Annapolis, Maryland 21401 (301) 269-7992 Balt./ (301) 858-5035 Wash.



## MISCELLANEOUS MEETINGS

- March 7-9** **Vulnerability & Resiliency in Children & Families: Focus on Children with Disabilities**, sponsored by the Center for Children with Chronic Illness & Disability, University of Minnesota at the Omni Inner Harbor Hotel, Baltimore, MD. Info: 612-626-2737.
- March 16** **Symposium on Practical Neurology for the Primary Care Physician**, at St. Joseph Hospital, Towson, MD. 7.5 Cat 1 AMA/PRA credits; 7.5 AAFP prescribed hours. Fee: \$35 physicians; \$20 house staff, nurses, allied health personnel. Info: 301-337-1114.
- March 16** **Technology Update for the Family Physician**, sponsored by the Maryland Academy of Family Physicians, at Loews Annapolis Hotel, Annapolis, MD. 5 Cat 1 AMA/PRA credits, 5 AAFP prescribed hours. Fee: \$50 MAFP members; \$75 nonmembers; no charge for residents and medical students. Info: William P. Jones MD 301-747-1980.
- March 25-27** **Gastrointestinal Surgery for Severe Obesity: An NIH Consensus Development Conference**, sponsored by the National Institute of Diabetes & Digestive & Kidney Disease, and the NIH Office of Medical Applications of Research, at the Masur Auditorium, The Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: 301-468-6338.
- April 10-14** **First World Congress on Stress, Trauma, and Coping in the Emergency Services Professions**, sponsored by The American Critical Incident Stress Foundation, at Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Jeffrey T. Mitchell PhD, 301-750-0856.
- April 17-21** **Fifth Annual Review and Update Course in Critical Care Medicine**, sponsored by the Society of Critical Care Medicine and Rush Presbyterian-St. Luke's Medical Center, at the Crowne Plaza Hotel in Rockville, MD. 37.5 Cat 1 AMA/PRA credits; 37.5 ACEP credits. Fee: \$695 physicians; \$525 physicians in training and allied health professionals. Info: Svetlana Lisanti, 201-385-8080.
- April 18-21** **Hard News: Issues & Answers in Medical Reporting: 11th Annual AMA Health Reporting Conference**, in Washington, DC. Fee: \$715 AMA members; \$900 nonmembers; \$275 residents and students. Info: 312-464-5102.
- April 29-30** **Ethical Issues in Research**, sponsored by Fidia Research Foundation at Georgetown University, Washington, DC. Fee: \$100; \$50 students. Info: 202-337-7185.
- May 8-11** **193rd Annual Meeting of the Medical and Chirurgical Faculty of Maryland - "American Medicine Today: Perspectives from Maryland,"** at the University of Maryland, University College, Center of Adult Education, College Park, MD. 15 Cat 1 AMA/PRA credits. Fee: no charge for Med Chi members; \$225 for nonmember physicians. Info: Michael Moran, Convention Director, 1-800-492-1056 in MD, or 301-539-0872.
- May 15-17** **Clinical Auscultation of the Heart**, sponsored by the American College of Cardiology at the Georgetown University Medical Center, Washington, DC. Info: 301-897-5400
- May 15-19** **43rd Annual Meeting and Scientific Session of the Maryland Academy of Family Physicians**, at the Sheraton Ocean City Resort and Conference Center, Ocean City, MD. 30.75 Cat 1 AMA/PRA credits; 30.75 AAFP prescribed hours. Fee: \$195 members; \$225 nonmembers; \$110 paramedicals. Info: Brad J. Cooper MD, 301-747-1980.
- May 17-18** **Annual Meeting of the Virginia Society of Otolaryngology - Head and Neck Surgery** at Omni Waterside Hotel, Norfolk, VA. Info: Donna Scott, 804-353-2721.

Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.

- March 7** **Laparoscopic General Surgery**  
**March 14** **Advances in Treatment of Prostatic Disease**  
**March 28** **New Approaches to Infertility Evaluation and Treatment**  
**April 25** **Psychoneuroimmunology: The New Physiology**

## MISCELLANEOUS MEETINGS

American College of Emergency Physicians, 1211 Cathedral St., Baltimore, MD. Info: 301-727-2237.

March 14, May 2, June 27  
April 4, June 6  
April 13  
May 10

Board of Directors  
Executive Committee Meeting  
Oral Board Preparation Courses and Private Tutorials  
Annual Meeting, in conjunction with Med Chi's Annual Meeting

Maryland Society of Eye Physicians and Surgeons, 1211 Cathedral St., Baltimore, MD. Info: 301-244-7320.

March 1  
April 18

Cornea Eye Day Program at the University of Maryland at Baltimore, MD.  
Executive Committee Meeting

### SAINT JOSEPH HOSPITAL

#### HOSPITAL PEDIATRICIANS

Positions available for full-time and part-time hospital based pediatricians. Salary and benefits are competitive.

Contact: William F. DeVoe, M.D.  
Head, Department of Pediatrics  
Saint Joseph Hospital  
7620 York Road  
Baltimore, MD 21204  
337-1113

We invite your comments as well as scientific articles.

Write: *Letters to the Editor* and *Commentary*  
MMJ, 1211 Cathedral St.  
Baltimore, MD 21201-5585

#### Maryland Advertisers

To advertise in MMJ call:  
Network Publications  
301-235-0500



## PHYSICIAN'S RECOGNITION AWARD

### Recipients

During the months of November and December 1990, the following physicians received the American Medical Association's (AMA's) Physician Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Alper, Melvin Gustavus  
Block, Dale Kenneth  
Bunales, Roy Holasca  
Butt, Harvey Rudolph  
Colella, Joseph John  
Duncan, Mark Douglas  
Earles, Gordon Homer  
Farson, Richard Alan  
Garcia, Ignacio Tambungui  
Khayat, A. Victor

Koh, Dae Sok  
Kroopnick, Robert Beck  
Luban, Norman Alan  
Martin, Neil Fred  
McGowan, Larry  
Nwaneri, Ngozichukwuka J.  
Payne, John Walter  
Perry, Marilyn Donna  
Ridgley, Charles David  
Robinson, Howard Neil

Salcedo, Vivencio L.  
Samorodin, Charles Steven  
Shrestha, Maheswari  
Silfen, Eric Zachary  
Strobel, David  
Trout, Hugh Henry  
Vietz, Paul Fritz  
Wallace, Joseph J.



# AIM HIGH

## PUT YOUR MEDICAL CAREER IN FLIGHT.

Discover the thrill of flying, the end of office overhead and the enjoyment of a general practice as an Air Force flight surgeon. Talk to an Air Force medical program manager about the tremendous benefits of being an Air Force medical officer:

- Quality lifestyle, quality practice
- 30 days vacation with pay per year
- Support of skilled professionals
- Non-contributing retirement plan if qualified

Discover how to take flight as an Air Force flight surgeon. Talk to the Air Force medical team today. Call

**USAF HEALTH  
PROFESSIONS**

**(301) 981-7897  
COLLECT**



### INTERNISTS

BC/BE needed to join 6 internists in a physician-owned multi-specialty practice located in central Maryland. Excellent benefits and competitive salary. Reply with CV to *MMJ*, Box 3, 1211 Cathedral St, Baltimore, MD 21201.

### PHYSICIANS WANTED

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

### FAMILY PRACTICE

Two female family practice physicians desire a third to join them in an active and growing Pasadena, MD practice. Must be Board Certified. Call Carla Var-num at 255-2700.

### WESTERN MARYLAND

BC/BE internist to join BC-inter-nist in busy, unique rural practice. 72-bed hospital with ICU. 4-season recreational area. Send CV: P.O. Box 486, Oakland, MD 21550.

### FP/EM PHYSICIAN

Start-up primary care/ambulatory medical practice in Anne Arundel County. Full or part-time, flexible hours, excellent salary, residency required. Contact: *MMJ*, Box 2, 1211 Cathedral St, Baltimore, MD 21201.

### ORTHOPAEDIC SURGEON

BC/BE to join 6 other ortho-paedists in a large multispecialty group. Interest and expertise in spine surgery is a plus. Extensive support system and modern facility located in Columbia, MD near the cultural advantages and medical schools of the Baltimore & DC areas. Please direct in-quiries and CV to: Patuxent Medi-cal Group, Inc., 2 Knoll North Dr., Suite 401, Columbia, MD 21045, Attn: Physician Recruiter.

### INTERNAL MEDICINE PRACTICE FOR SALE

Excellent Pikesville location. Es-tablished MD is retiring. Spacious 1,050 sq ft incl. all furnishings & equipment; 3 large exam rooms, consult & x-ray/lab rooms. No HMO patients. Contact Ann Bar-come, Kohler HealthCare Con-sultants, Inc. 301-441-3740.

### MEDICAL OFFICE

Suitable for 1 or 2 physicians: St. Mary's County, a rapidly growing, semirural area. Contact Leon Berube for details: 997 Old Route Five, Mechanicsville, MD 20659 (301-884-3113).

### MEDICAL-SURGEON'S OFFICE TO SHARE

Pikesville: office with private con-sultation room to sublease, full-or part-time; x-ray and lab available. Parking lot; near Metro stop & public transportation. 301-484-8066 except Tuesday.

## BECO ASSOCIATES

### Medical Suites Available

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550

## FELLS POINT MEDICAL BUILDING

The FELLS POINT MEDICAL BUILDING will be a 40,000 foot multi-speciality medical building at the corners of Fleet and Central Streets. It is part of the Inner Harbor complex. Occupancy of the building will be late 1992. Leases are available.

Some board certified surgical sub-specialities as well as all medical specialities are needed. A walk-in clinic will be open 18 hours a day-seven days a week.

Serious inquiries only. Contact:

**Lewis B. Newberg, M.D.**  
(301) 988-9529  
FAX: (301) 461-3430



### OFFICE SPACE FOR RENT

Annapolis - Shared suite with psychiatrist and LCSW in medical building with parking. Near hospital. 269-0670.

### OFFICE SPACE

Available for sublet in the Pikesville area. Morning and afternoon hours available. Please contact 484-5238.

### OFFICE SPACE FOR RENT

1,050 sq ft new office next to St. Joseph Hospital. 301-337-6800.

### OFFICE EQUIPMENT FOR SALE

1 wall mount otoscope, welch; 1 EKG machine automatic, 12 lead, portable, Bricher, 4 yrs old; 1 blood pressure wall mounted (trim line); 1 centrifuge, clay adams; 1 TITMUS vision test; Medi fast softwear (office practice); x-ray film viewer; 2 treatment tables. Info: P.O. Box 2161, Hagerstown, MD 21740.

### FOR SALE

Office x-ray machine. Good condition. Picker x-ray 5146-S, \$500. Processor model M 7B, \$2500. Call: 703-765-6709. Write: M.S. Baig, P.O. Box 118, California, MD 20619.

### FOR SALE

7000+ sq ft historic mansion on 1.4+- acres in Catonsville, perfect for professional offices and/or home (RO zoning). Needs restoration. Full County Approvals in place to permit construction of 21,000+ sq ft medical office building. Financing available. Principals only. 301-528-0124.

### NURSING HOME

Baltimore suburban 45-bed facility with excellent inspection history. \$300M cash flow to present retiring owner. Favorable financing. Corporate Strategies, Inc. 301-563-3511.

### MMJ Classified Advertising

*Med Chi Members:*  
\$5 per line per insertion

*Physician Nonmembers:*  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items will be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment.

## PHYSICIANS

Do something different  
two days a month

Receive a commission  
in the Army National Guard

*The Army National Guard has immediate openings for physicians which require participation of only 2 days a month plus a 15-day Annual Training Period (a total of 39 days per year).*

### YOU WILL BE ELIGIBLE

- A COMMISSION IN THE ARMY NATIONAL GUARD
- AN EXCELLENT PART-TIME INCOME
- PAID ATTENDANCE AT:
  - CONTINUING MEDICAL EDUCATION COURSES
  - AMA CONFERENCES
  - KPUP (Active duty assignment up to 30 days in Europe, Asia and South America)
  - TRAINING AT U.S. ARMY HOSPITALS
- POST EXCHANGE & COMMISSARY
- MILITARY AIR TRAVEL WITHIN THE 50 STATES

### MARYLAND ARMY NATIONAL GUARD

PHIL HOWARD  
(301) 653-4618

610 Reisterstown Road, Pikesville, MD 21208



## Physicians

Vacancies exist at the Department of Veterans Affairs Medical Officer of the Day (MOD) positions. Applicants must possess a current license to practice medicine in one of the fifty states. Varying tours of duty are 6 p.m. — 6 a.m. Monday thru Thursday; 6 p.m. — 8 a.m. Friday; and 8 a.m. — 8 a.m. Saturday and Sunday with an hourly rate of \$35.00.

Fort Howard VA Medical Center is a General Medical and Rehabilitation Long-Term Care facility located just 18 miles from downtown Inner Harbor.

For more information or for an application contact:

**Dr. Edward Rusche or Renee Hoeffler**  
**(301) 687-8795 or 687-8811**

An Equal Opportunity Employer

# American Medical Association

## HARD NEWS: Issues & Answers in Medical Reporting

AMA's Eleventh Annual Health Reporting Conference  
Washington, D.C. • April 18-21, 1991



If you are a medical communicator wishing to sharpen your skills, plan to attend the AMA's Eleventh Annual Health Reporting Conference, Thursday, April 18 through Sunday, April 21, 1991 in Washington, D.C.

This is a unique conference designed for medical reporters, physician broadcasters and medical spokespeople. The conference features a combination of skills development courses in broadcast writing, interviewing, editing and production, plus opportunities to have your tapes critiqued by experts. Network with the pros and learn valuable tips on breaking into the business, developing the skills and dealing with the issues confronting medical broadcasters today.

Faculty includes experienced physician broadcasters, network producers, broadcast consultants, writers, editors, producers and professional speakers trainers.

	Until February 15, 1991	February 16 and beyond*
<b>Fees:</b>		
AMA Member	\$650	\$715
Non-Member	\$825	\$900
Students/Residents	\$250	\$275
Optional Day	\$275	(not available after 2/15 cut-off)
Individual Coaching Sessions	\$ 60	\$ 75

Course tracks are offered in Speakers Training, and Broadcasting (Introductory, Intermediate and Advanced). Electives are open to all participants. Complete registration information is available by calling 312/464-5102.

Fee includes Welcome Reception, April 18, 6:30 p.m., continental breakfasts, luncheons, video and audiotapes, workshops and materials. Please make check payable to the American Medical Association. We will confirm your registration by mail.

\*Registration will be accepted only on a space available basis after the February 15, 1991 cut-off date.

Register by phone or mail. Please register by February 15, 1991. This conference offers small classes, and the AMA cannot guarantee appropriate level placement after the registration cut-off date. To register, complete and return this form and mail in an envelope with your registration fee to:

**AMA Television, Radio and Film Services  
Health Reporting Conference  
515 North State Street, 17th Floor  
Chicago, IL 60610**

Name \_\_\_\_\_ Specialty \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone number \_\_\_\_\_ (office) \_\_\_\_\_ (home)

This conference is supported by a grant from Pfizer Laboratories and Roerig, Divisions of Pfizer Pharmaceuticals.



AMERICAN  
MEDICAL  
TELEVISION



**Pharmaceuticals**  
Pfizer Labs & Roerig Divisions





## Join us in a new kind of partnership ... uniting doctors, lawyers, teachers, parents, and youth against drug and alcohol abuse.

Become part of the Maryland Doctor/  
Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-  
hand knowledge and experience to make  
a difference in winning the war against  
drugs. Become part of a unique initiative  
in Maryland to bring doctor/ lawyer  
education teams into schools to talk  
about the medical and legal consequen-  
ces of drug and alcohol abuse.

To volunteer or for more details,  
call Med Chi's Public Relations  
Department at 301-539-0872,  
1-800-492-1056.

Doctor/Lawyer/Teacher Partnership  
Against Drugs

# YOCON<sup>®</sup>

## YOHIMBINE HCl

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it, however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon<sup>®</sup> is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

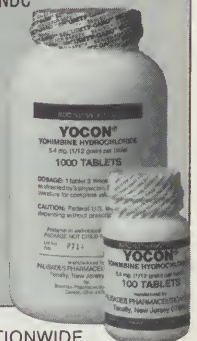
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon<sup>®</sup> 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

#### References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.


Rev. 1/85



AVAILABLE AT PHARMACIES NATIONWIDE

**PALISADES  
PHARMACEUTICALS, INC.**

219 County Road  
Tenafly, New Jersey 07670  
(201) 569-8502  
1-800-237-9083



# Confidential

Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians with a confidential and nondisciplinary focus.

Addiction.....Marital/Family Conflicts.....Psychiatric Illness.....Organic Impairment.....Physical Handicap.....If these problems exist, we can help find the solutions. Call us.

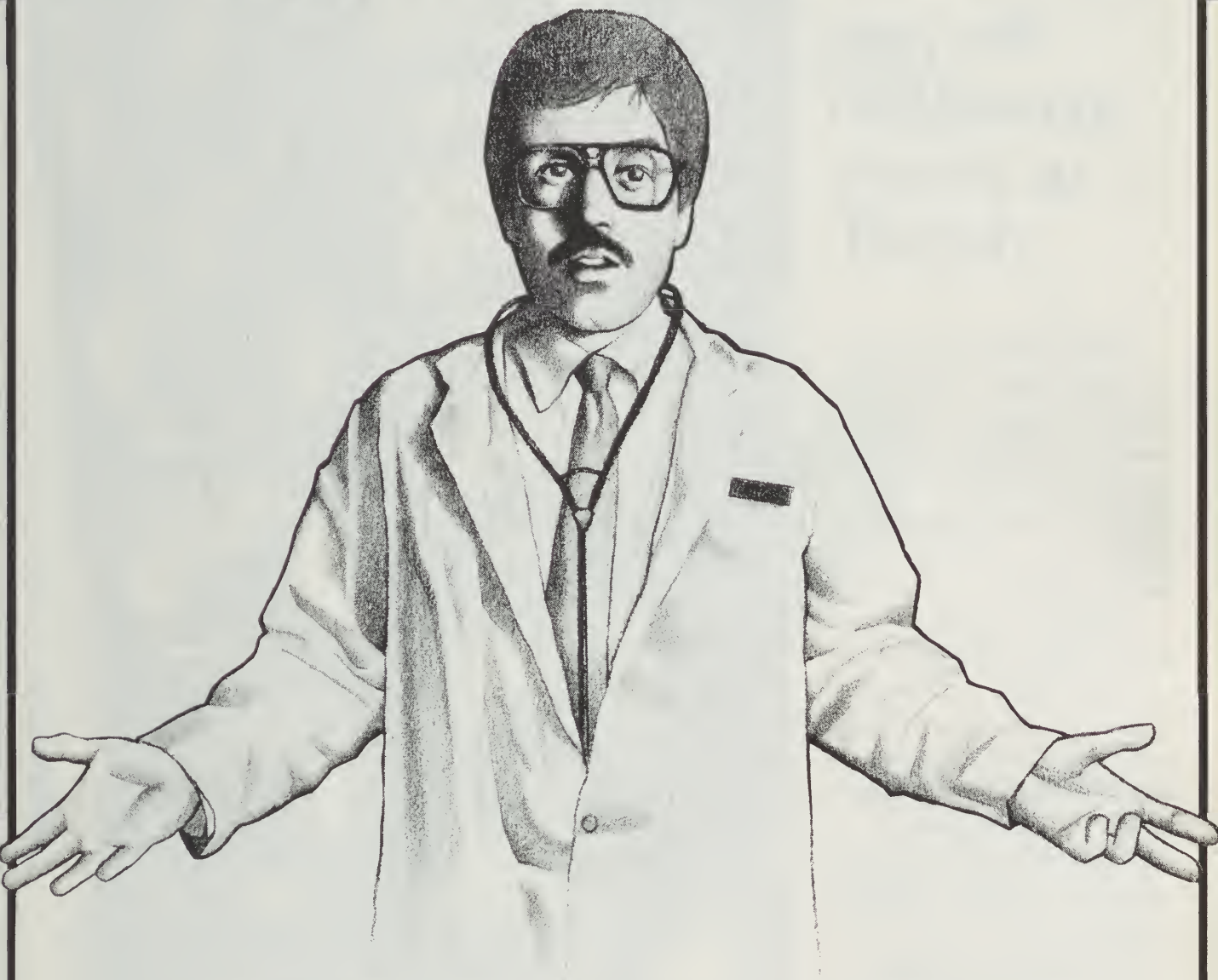
The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families. The Committee is **NONDISCIPLINARY** and information is kept **CONFIDENTIAL**. If you, a colleague, or family member is in need of our services call:  
**(301) 539-0872**  
in Maryland **1-800-492-1056**  
Message line **(301) 727-0120** (24 hours a day, 7 days a week) Leave a message.



*HELPING IS OUR BUSINESS...If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation  
1211 Cathedral Street, Baltimore, Maryland 21201  
Please note on your donation: "Physician Rehab"*



# HOW ABOUT IT?



Is it fair that only some Maryland physicians support the political activity  
that benefits all physicians?

**JOIN THE CAUSE! GET INVOLVED! GET POLITICAL!**

Join Maryland Medical Political Action Committee

Send your \$100 check to:  
Harold Bob, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201

Contributions to AMPAC and State PAC are not deductible as charitable contributions for Federal income tax purposes.

# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.



*Lumbar Herniated Disc*

## **Magnetic Imaging of Baltimore**

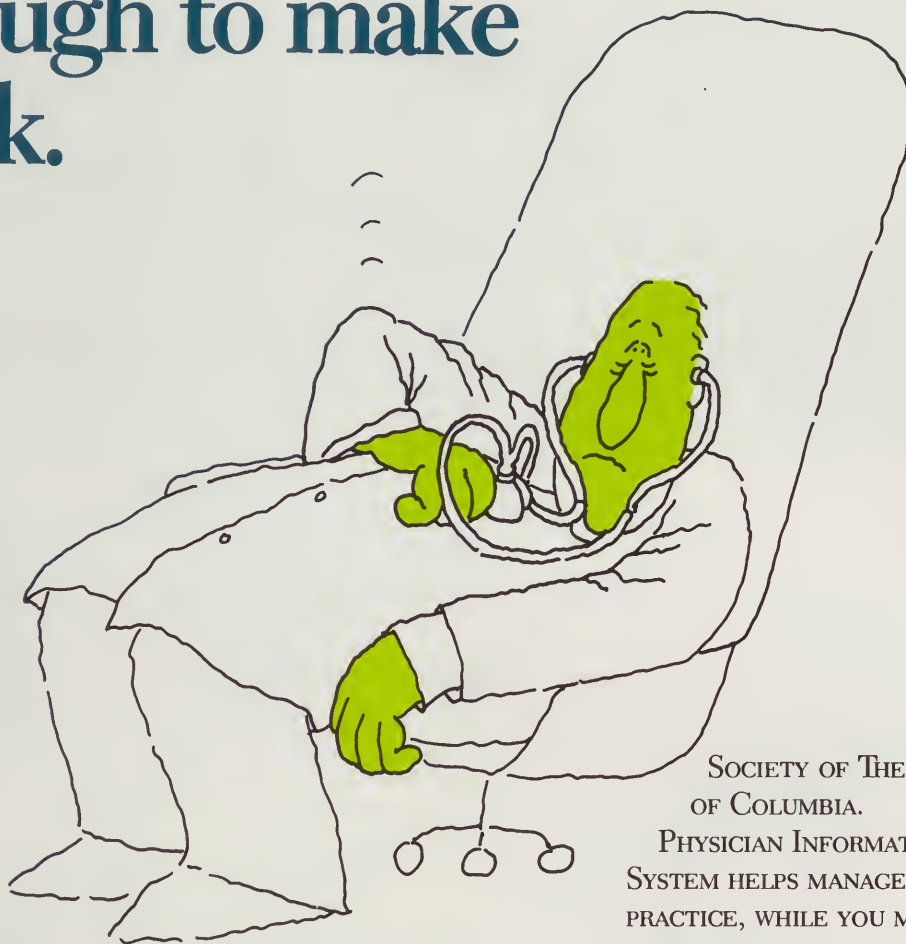
6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)



# Competition, HMOs, Insurance and slow-paying patients... it's enough to make you sick.



THE PROBLEMS  
OF MANAGING A  
PRACTICE TODAY  
CAN REALLY MAKE  
YOU SICK.

EVEN WORSE,  
THEY CAN MAKE THE  
BUSINESS END OF YOUR PRACTICE  
SICK, TOO. THAT'S WHERE WE  
CAN HELP.

WE'RE CBSI, THE LEADER IN  
MEDICAL OFFICE AUTOMATION  
SYSTEMS SINCE 1977. OUR PHYSI-  
CIAN INFORMATION SYSTEM  
SUBMITS YOUR INSURANCE  
FORMS ELECTRONICALLY, POSTS  
PAYMENTS AND ADJUSTMENTS  
AUTOMATICALLY, AND RUSHES  
YOU COMPLETE, UP-TO-THE-  
MINUTE PATIENT CLINICAL AND  
FINANCIAL DATA. CURRENTLY  
RELIED UPON BY MORE THAN

5,000 PHYSICIANS IN OVER 50  
MEDICAL SPECIALTIES AROUND  
THE AREA. MORE THAN 99% OF  
THESE SYSTEMS ARE STILL IN USE  
TODAY BECAUSE THEY'RE FLEX-  
IBLE, ADAPTABLE AND CBSI  
BACKS THEM WITH UNPARAL-  
LELED HARDWARE MAINTEN-  
ANCE, CUSTOMER SUPPORT  
AND TRAINING.

SINCE 1981, CBSI CONTINUES  
TO BE THE ONLY PROVIDER OF  
MEDICAL OFFICE AUTOMATION  
ENDORSED BY THE MEDICAL

SOCIETY OF THE DISTRICT  
OF COLUMBIA.

PHYSICIAN INFORMATION  
SYSTEM HELPS MANAGE YOUR  
PRACTICE, WHILE YOU MANAGE  
YOUR PATIENTS.

CALL 770-2292 RIGHT NOW TO  
FIND OUT MORE ABOUT PHYSICIAN  
INFORMATION SYSTEM. IN  
MARYLAND, CALL TOLL-FREE AT  
1-800-638-6364.

# CBSI


COMPUTER BUSINESS SYSTEMS, INC.

**YOUR PRACTICE IS OUR BUSINESS.**

6211 Executive Boulevard,  
Rockville, Maryland 20852  
(301) 770-2292  
1-800-638-6364 in Maryland

An Affiliate Member of MedServ

**ALPHA MICROSYSTEMS**  
RIGHT FROM THE START.



## The choices you make now may make all the difference later.

The decisions you make in a crisis will have a lasting impact on your patient's health. In the same way, the medical malpractice insurer you choose now may make all the difference to your professional and financial well-being in the years ahead.

When you choose Princeton, you're choosing a company with a solid track record. A company with years of experience providing professional liability insurance for physicians, and a history of successfully defending policyholders against meritless claims.

You're also choosing a company that's flexible enough to design policies that meet your individual coverage needs. Our innovative

*Occurrence Plus* policy, for example, combines the best features of standard occurrence and claims-made and offers you the broadest insurance protection available.

And coverage is only half the story. Princeton has seasoned specialists working on your behalf -- so service is prompt and professional. Plus, our team of risk management consultants is ready to answer your questions, or arrange on-site educational programs.

Whether it's your patient's future, or your own, that's on the line, making the right choices is critical. Choose the insurer that offers experience, flexibility and service. Choose Princeton. Call your independent insurance agent today.



**Princeton Insurance Company**

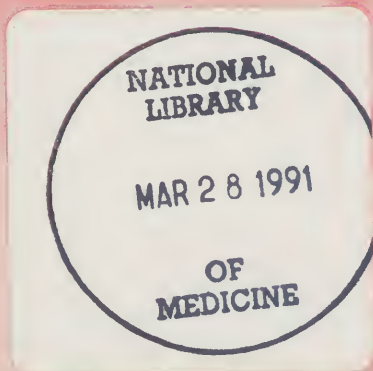
4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900



#1 MA76M

V. 80 NO. 4 1991  
C. 02-----SBN: 570054434  
TI: MARYLAND MEDICAL JOURNAL

2  
NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE



MMJ

Maryland Medical Journal  
APRIL 1991  
Harbor Hospital Center:  
Preparing Physicians for the Future

Endorsed by Med Chi  
for Maryland Physicians

© 1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.



## It's A Closed Box.

Simply put, your Medical Mutual premiums go into a closed box . . . and you own the box. We pay claims, we pay to defend physicians, we pay operating expenses. Any money left over belongs to you. That's it. No money goes to out-of-state owners, no money goes to subsidize operating expenses of a parent company located in another state. Dividends are paid to you, not to outside stockholders.

The physicians of Maryland planned it this way when you asked the Maryland General Assembly to create Medical Mutual to meet your special insurance needs. It's a concept that has worked well for over 15 years, and it's a concept that has made Medical Mutual the choice of the vast majority of physicians across the state.

The closed box. We're the only ones who operate this way. Why accept anything less?



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



In Bethesda And Potomac, Maryland

# One Choice Is Obvious

Anyone can build a large home in Potomac or Bethesda. But if you're willing to pay the price for luxury and convenience, you should also be getting a lot more for your money than just size and location. You should be getting a home that justifies its price down to every last detail. With noteworthy design.

Superior and innovative energy conservation techniques. Craftsmanship. And exceptional quality control.

Exactly the things our industry and peers have considered when, for over a decade, they've consistently honored Mitchell & Best with local, regional and national awards in all four categories.

And that's important to know. Because it means you'll always be able to choose the very finest home. A home that's more than just impressive to look at... a home that is a certified winner in every way. And not just because we say so.

## Grand Opening... EAGLE RIDGE

Our newest, largest luxury homes. In the woods... in Avenel.



STONEY CREEK KNOLL	840-9899	NORMANDY HILLS	983-8443
PLAYER'S TURNING AT AVENEL	365-1800	POTOMAC BEND	926-8891
PLAYER'S CROSSING AT AVENEL	299-8890	EAGLE RIDGE	365-6354
MAPLEWOOD PARK	530-8959	KENTLANDS	948-9156
PLAYER'S GATE	469-0392		

"We are pledged to the letter and spirit of U.S. policy for the achievement of Equal Housing Opportunity throughout the Nation. We encourage and support an affirmative advertising and marketing program in which there are no barriers to obtaining housing because of race, color, religion, sex, handicap, familial status, or national origin."



**C-I/Mitchell  
& Best Company**  
The homes of choice.



**Princeton's  
Maryland  
Agents**

Mr. Bruce White  
Beall, Garner, Screen & Geare  
Cumberland, MD (301) 722-2500

Ross Cohen  
Harry Cohen Insurance Agency, Inc.  
Baltimore, MD (301) 366-3030

Bob G. Urch, Jr.  
Comprehensive Risk Management  
Timonium, MD (301) 560-2424

Scott Becker  
Consolidated Insurance  
Baltimore, MD (301) 944-9550

Israel Teitelbaum  
Contemporary Insurance Services  
Washington, D.C. (202) 887-5563

Bill Baird  
Corroon & Black, Stump, Harvey, Co.  
Hunt Valley, MD (301) 527-1200  
Bethesda, MD (301) 951-3300

Byrl Hendler  
Diversified Insurance Industries  
Baltimore, MD (301) 433-3000

William C. Garrett  
William C. Garrett & Associates  
Towson, MD (800) 458-7295

Denise Dortch  
The Harjes Agency  
Hunt Valley, MD (301) 785-6161

Paul Snodgrass  
Ralph W. Lee & Company  
McLean, VA (703) 556-8787

Mitch Diamond  
Medical Liability Agency, Inc.  
Towson, MD (301) 494-1206

John Harris  
Med Net Financial  
Bethesda, MD (301) 961-8861

Korky Onal  
Onal's Insurance Agency  
Linthicum, MD (301) 859-1990

Mike Reese  
Reese, Yeatman & Associates, Inc.  
Bethesda, MD (301) 657-9490

Michael Gardner  
Wright-Gardner Insurance, Inc.  
Hagerstown, MD (301) 733-1234



## **Making the right choices means asking the right questions.**

You know the questions to ask your patients. Questions that will provide the information you need to make an informed decision about medical treatment.

When it comes to choosing a medical malpractice insurer, knowing which questions to ask--and how to interpret the answers--is no less important. Because just as your treatment decisions may have a lasting impact on your patient's long-term health, your choice of insurer may make all the difference to your professional and financial well-being in the years ahead.

In an uncertain medical situation, you might consult a specialist. When you're making decisions about insurance, why not consult with an insurance specialist? An expert who can suggest which

questions to ask, guide you through the technical jargon, and help you select the coverage that's right for you.

That's where Princeton's network of independent insurance agents comes in. Our agents understand the insurance needs of health care professionals. They'll show you how to compare costs and benefits, and help you avoid gaps or duplications in coverage.

Do ask an agent why Princeton should be your choice. Ask about our financial strength, about our claims management philosophy that vigorously defends physicians against meritless claims...and about our new office package policy that offers protection for your practice and premises. We think you'll like the answers.



**Princeton Insurance Company**  
4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900



# MMJ

*Maryland Medical Journal*

VOLUME 40 NO 4

## ARTICLES

- Harbor Hospital Center: Preparing Physicians for the Future . . . . . 269**  
*Colen Heinritz MD*
- An Unusual Manifestation of Wegener's Granulomatosis . . . . . 271**  
*Robert D. Weiss MD and Victor R. Hrehorovich MD*  
Unusual manifestations of Wegener's granulomatosis, such as urethral involvement, should be treated aggressively to prevent full-blown reactivation of the disease.
- Prognosis of Oncology Patients Receiving Intensive Care  
Using the APACHE II Scoring System . . . . . 273**  
*Robert Dart MD, Bhavdipkumar Patel MD, Jorge Perez-Alard MD, Surender Vaswani MD,  
and Sita Yanamadala MD*  
In a study at Harbor Hospital Center, the Acute Physiology and Chronic Health Evaluation (APACHE II) system greatly underestimated and was, therefore, not useful as a predictor of mortality for patients with oncological disorders.
- Myocardial Infarction in Pulmonary Edema . . . . . 279**  
*Syed M. A. Riaz MD and Martha Selonick MD*  
A prospective study of forty-four consecutive patients admitted to the ICU/CCU with pulmonary edema found a 48 percent overall incidence of myocardial infarction.
- Peripartum Cardiomyopathy: A Case Study . . . . . 281**  
*Eli B. Alegado MD and Joseph T. Mardelli MD*  
Although the diagnosis of peripartum/postpartum cardiomyopathy is uncommon, immunosuppressive therapy appears to be a safe and effective treatment.
- Rupture of the Spleen In Non-Hodgkin's Lymphoma: A Case Study . . . . . 285**  
*Carlos A. Conrado MD*  
Prompt recognition and emergency surgery of pathological rupture of the spleen are necessary in patients with non-Hodgkin's lymphoma.

The principal authors of these articles were residents in the Department of Medicine, Harbor Hospital Center, Baltimore, MD, at the time the manuscripts were initially drafted.

In order to encourage the reporting of unusual case findings, to promote excellence in medical reporting, and to enhance dissemination of information to physicians throughout Maryland, the *Maryland Medical Journal* offers an annual award for the best article published by a resident-in-training. Residents are urged to submit original research, case studies, or review articles to: Editor, MMJ, 1211 Cathedral St., Baltimore, MD 21201.

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

### Advisory Member

Carmine M. Valente PhD

### Art Director

Virginia Carter

### Graphic Assistant

Valentia McVey

### Communications Assistant

Lori Robinson

### Executive Director

Angelo J. Troisi FACHE

### Communications Director

Michelle Burke MHSA

Maryland Advertising  
Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

Copyright© 1991. MMJ Vol 40, No 4.  
The *Maryland Medical Journal*  
USPS 332080. ISSN 0025-4363 is pub-  
lished monthly by the Medical and  
Chirurgical Faculty of Maryland and  
is a membership benefit. Subscription  
rates: U.S. and U.S. possessions, one  
year: nonmembers \$35; foreign \$42.  
Single copy: members \$5; nonmembers  
\$7. Second class postage paid at Bal-  
timore, MD and at additional mailing of-  
fices. POSTMASTER: send address  
changes to *Maryland Medical Journal*,  
1211 Cathedral St., Baltimore, MD  
21201-5585. FAX 301-547-0915.

The views in this publication are those  
of the authors and do not necessarily  
reflect the opinion of the Medical and  
Chirurgical Faculty of Maryland.  
Publishing an advertisement does not  
imply endorsement of any product or  
service offered, or approval of any rep-  
resentation made.



Medical  
and Chirurgical Faculty  
of Maryland

## DEPARTMENTS

<b>A Clinical Moment with . . . Diabetes . . . . .</b>	<b>257</b>
<i>Management of Juvenile Patients...</i>	
<b>Executive Director's Newsletter . . . . .</b>	<b>259</b>
<b>Epidemiology and Disease Control Program . . .</b>	<b>263</b>
<i>Lyme Disease Update. . .</i>	
<b>Maryland Oncology Newsletter . . . . .</b>	<b>267</b>
<i>Mononucleated Cell Levels...</i>	
<b>Auxiliary . . . . .</b>	<b>290</b>
<i>Presidents: 1990-1991...</i>	
<b>Quality Practice Digest . . . . .</b>	<b>295</b>
<i>Medical Review Activies...</i>	
<b>Word Rounds . . . . .</b>	<b>299</b>
<i>"Say Something in Medicine..."</i>	
<b>Board of Physician Quality Assurance . . . . .</b>	<b>303</b>
<b>Library Page . . . . .</b>	<b>311</b>
<i>Marcia Noyes . .</i>	

## MISCELLANY

<b>Members in the News . . . . .</b>	<b>252</b>
<i>Hennessy, Jensen, Parnes, Reichmister</i>	
<b>Annual Meeting . . . . .</b>	<b>288</b>
<b>Doctors Note . . . . .</b>	<b>315</b>
<b>Classified Ads . . . . .</b>	<b>320</b>
<b>Information for Authors . . . . .</b>	<b>318</b>
<b>Erratum . . . . .</b>	<b>322</b>

Cover: Shown, from Harbor Hospital Center are (left to right)  
Jorge Perez-Alard MD, Ideadi Ndukwu MD, Robert Dart MD,  
Griselda Tiu MD, and Christopher DeBorja MD  
with their patient, Anna Bryant of Glen Burnie.

Cover photo by Carol Cornwell;  
cover design by Virginia Carter.

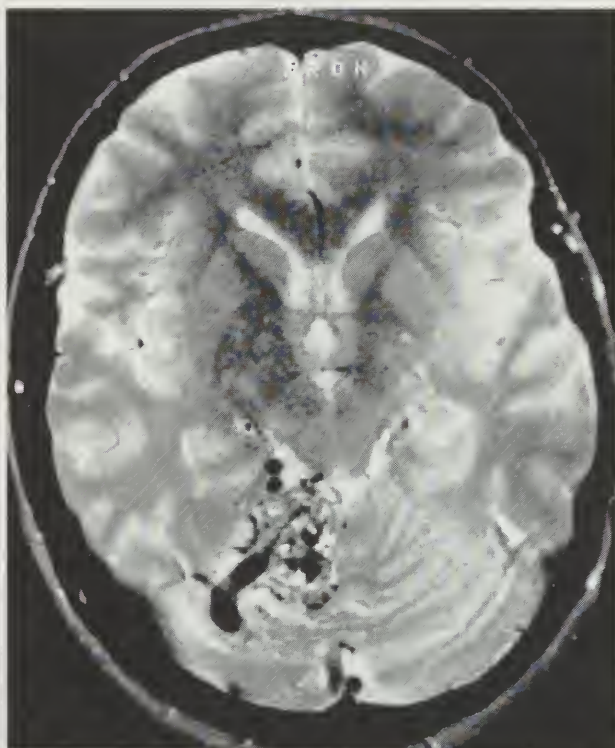
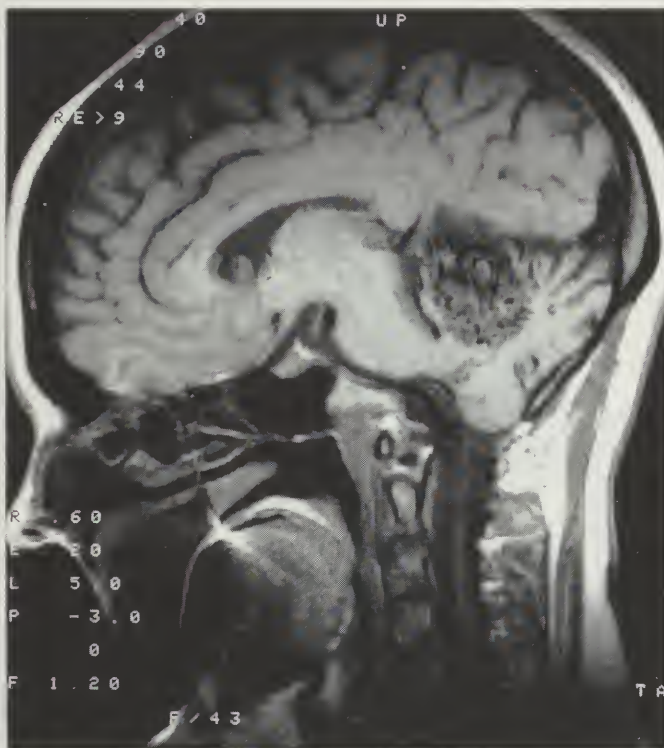


# Our Pictures Are Worth A Thousand Words.<sup>TM</sup>

## Case #14

43 year old female with left-sided paresthesias and history of a "stroke" 23 years ago.  
**DIAGNOSIS: ARTERIO-VENOUS MALFORMATION (AVM) of the right side of the cerebellum.**

AVMs are the most common vascular abnormality affecting the brain; 95% are supratentorial. The classic tangle of dilated arteries and veins is usually associated with rapid flow and A-V shunting. This is manifested by a "flow void" absence of signal, making the AVM easily imaged by MRI. The appearance can be complicated by the presence of acute or chronic hemorrhage and partial thrombosis or slow flow. Magnetic Resonance Angiography (MRA) and Gadolinium enhancement may both be helpful in evaluation of the AVM.



At Drs. Copeland, Hyman & Shackman, P.A. we are proud of our high resolution, state-of-the-art imaging. We look forward to consulting with you on any diagnostic imaging procedure in order to best serve you and your patients in the most expeditious and economic manner.



We provide convenient evening and week-end hours at both MRI locations, double-readings for quality assurance, and FAX capabilities for delivering reports immediately.

**You work hard to gain your patients' trust and confidence. At Drs. Copeland, Hyman & Shackman, we'll help you keep it.**

## Drs. Copeland, Hyman & Shackman P.A.

MRI Examinations available at:

Pomona Square Suite 119  
1700 Reisterstown Rd.  
(301) 486-8830

White Square Imaging Center  
9105 Franklin Square Drive  
(301) 574-8880

Harford Imaging Center  
104 Plumtree Rd./Belair  
Opening Summer 1991

---

**Drs. Copeland, Hyman & Shackman are pleased to announce the opening of the Harford Imaging Center in the summer of 1991, including MRI, CT, nuclear medicine, ultrasound, low-dose mammography and general x-ray services.**

---

# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS™ MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

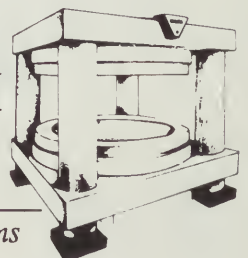
At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



**ACCESSIBLE MRI of  
BALTIMORE COUNTY, INC.**

Formerly Greater Baltimore MRI Center, Inc.

110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



# ***The Personality Disorder Treatment Program of Sheppard Pratt Hospital***

Very often, specialized inpatient evaluation and treatment is a critical step in the effective care of a borderline patient.

The Personality Disorder Treatment Program at Sheppard Pratt offers a combination of services that may help to untangle difficult clinical questions and facilitate your patient's continued outpatient treatment.

We offer:

- ☐ Short-term and intermediate-term specialized inpatient treatment
- ☐ Extended-term intensive inpatient treatment
- ☐ Comprehensive diagnostic evaluation
- ☐ Psychotherapy and psychopharmacology consultation
- ☐ Intensive individual and group psychotherapy provided by our staff of psychiatrists and psychologists
- ☐ Long-term treatment planning

If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Adult Admissions Office at:

(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ *Sheppard Pratt*  
A not-for-profit health system







Ann Sires is blessed with an earthy wisdom that allows her to accept what is. But deep inside also burns a fiery determination never to give into it.

Four years ago, Ann learned she had colon cancer. And about six months to live. She began a battle for life that would take her through eleven surgeries. Then two-and-a-half years ago, to an indispensable ally.

While in the hospital, her physician, Dr. James Congdon, introduced Ann to Caremark Homecare. Through a regimen of Total Parenteral Nutrition and chemotherapy, Caremark has helped Ann fight her cancer to a draw.

Yet, she realizes that this battle may never be fully won. Which is perhaps why Ann's greatest comfort comes from life's simple pleasures. A 12-year-old boy to bring up right. Five hundred bulbs in the ground waiting for spring. And the folks in Carnation, Washington who say you haven't lived until you've tasted Annie's Double Mint Apple Jelly.

Caremark Homecare. Because life should be worth living.<sup>SM</sup>

**CAREMARK**  
Affiliate Baxter Healthcare Corporation



Allan David Jensen MD

*Allan D. Jensen MD*, Assistant Professor of Ophthalmology at the Johns Hopkins Wilmer Eye Institute, was recently elected Chairperson of the Council of the American Academy of Ophthalmology (AAO), a policy-making body for more than 16,000 ophthalmologists. Dr. Jensen is also Chairperson of AAO's Council and the Federal Economic Policy Committee, and serves on

the AAO Board of Directors.

A graduate of Johns Hopkins University, he is Chief of Ophthalmology at Union Memorial Hospital, and Staff Ophthalmologist at Johns Hopkins Hospital and the Greater Baltimore Medical Center. A Diplomate of the National Board of Medical Examiners and the American Board of Ophthalmology, he is an active member of thirteen different professional societies.

In addition to his positions with the AAO, Dr. Jensen is currently serving as a member of the Board of Directors of the Maryland Society of Eye Physicians and Surgeons, is Vice President of the Baltimore City Medical Society, is Councillor from Baltimore for the Medical and Chirurgical Faculty of Maryland, is a member of the Medical Advisory Board of the Maryland Foundation for Health Care, is a consultant for the Criteria Review Panel of the Delmarva Foundation for Health Care, and is Treasurer of the Baltimore City Medical Society Political Action Committee (PAC).



*Jerome P. Reichmister MD* was recently appointed Orthopedist-in-Chief at Sinai Hospital of Baltimore. President of the Sinai Hospital Medical Staff since 1989, Dr. Reichmister has also served on Sinai's Operating Room Committee, Medical Executive Committee, and as Chairperson of the Orthopedics Committee.

An attending surgeon at Sinai Hospital for twenty-one years, he is Director of Orthopedic Education, holds a faculty position as Clinical Associate Professor of Orthopedic Surgery at the University of Maryland Medical School, and is Clinical Instructor of Orthopedic Surgery at the Johns Hopkins University School of Medicine; his love of teaching earned him Sinai's Golden Apple Award in 1974.



Robert Hennessy MD

*Robert G. Hennessy MD*, Chief of the Neurological Surgery Section at St. Agnes Hospital, recently assumed the post of President of the Medical Staff. Dr. Hennessy received his undergraduate degree from Holy Cross College in Worcester, MA and his medical degree from Georgetown University in Washington, DC. He is certified by the Board of Neurological Surgery, is a Fel-

low of the American College of Surgeons, and is a Diplomate of the National Board of Medical Examiners. Dr. Hennessy is also an active member of a number of professional societies in addition to Med Chi, including the American Association of Neurological Surgeons, the Congress of Neurological Surgery, and the Neurological Society of the Virginias, for which he is president-elect.



Carol Parnes MD

*Carol Parnes MD* was recently installed as the President of the Professional Staff of the Howard County General Hospital (HCGH); she is the first woman and the first pediatrician to be elected to this top leadership position. A graduate of Barnard College and the Albert Einstein College of Medicine, she completed her residency and training at Montefiore Hospital in New York.

In addition to managing a busy Columbia practice, she has been extensively involved in the hospital, including membership on the Credentials Committee, Medical Executive Committee, Finance Committee, Ethics Committee, and the Dinner Dance Committee which coordinates a major annual fund-raiser sponsored by HCGH physicians.





# Talk to us. (If you talk enough the dictation equipment is free!)

- Solves staffing, space and reliability problems.
- 3600 lines a day qualifies for free equipment.
- Fast turn-around, including 3-hour STAT service.
- Printout in your office, instant revisions.

If your practice generates 3600 lines a day or more, you qualify for a complete digital dictating system without charge. Favorable arrangements are also available with smaller volumes.

Then, transcriptions are as easy as picking up your phone and dictating directly to our high-security digital recording system. Expert medical transcriptionists enter your notes into our data banks for backup, return transmission and printout. At the same

time, you'll also be building a data base for easier conversion to electronic record keeping.

Transcriptions International's electronic system is today's answer for physicians, hospitals, clinics, HMOs, group practices, rehab centers, law firms or any business needing quick, accurate and economical transcriptions.

Call today for a no obligation proposal and talk to us about your dictation needs.

**For more details, call 1-(800)-348-4326.**

 **TRANSCRIPTIONS**  
INTERNATIONAL, INC.

703 Giddings Avenue, Annapolis, MD 21401. (301) 280-6205

# A BRIGHT IDEA TO START WITH...



**180mg**  
**Calan<sup>®</sup> SR**  
(verapamil HCl) 180 mg  
SUSTAINED-RELEASE CAPLETS

*Address medical inquiries to:*  
G.D. Searle & Co.  
Medical & Scientific  
Information Department  
4901 Searle Parkway  
Skokie, IL 60077



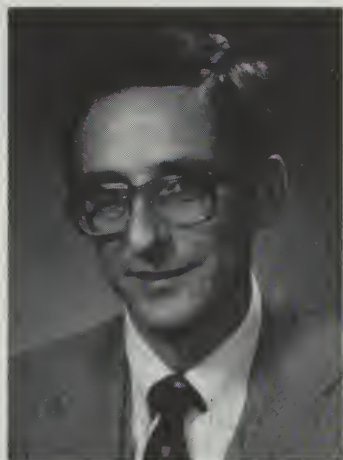
# COMMITTED TO EXCELLENCE

*Roche  
Laboratories  
presents the  
winners of  
the 1990*



Please join us in honoring these outstanding Roche sales representatives who have distinguished themselves by a truly exceptional level of professionalism, performance and dedication to quality health care.

Throughout the year, each of these award-winning individuals has consistently exemplified the Roche Commitment to Excellence, and we're proud to invite you to share in congratulating them on their achievement.



Clifford R. Crown



Ronald C. Hardnock



Henry C. Shimonkevitz

# COMMITTED TO TOTAL HEALTH CARE

*Roche  
Laboratories  
presents the  
resource library  
for patient  
information*

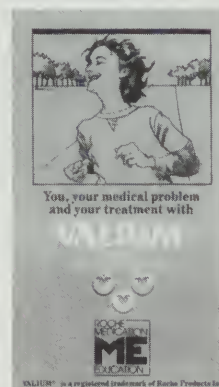
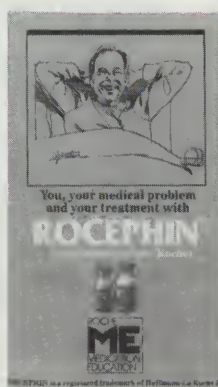
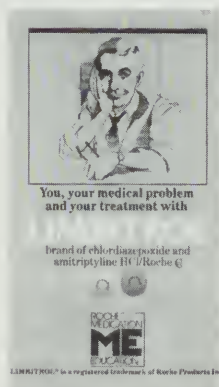
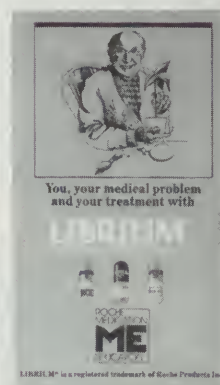
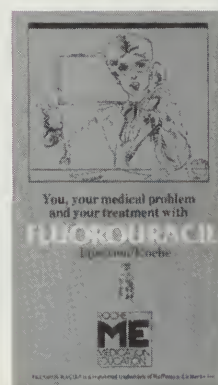
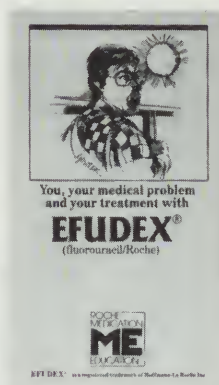
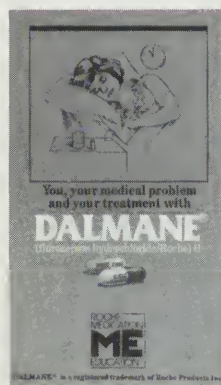
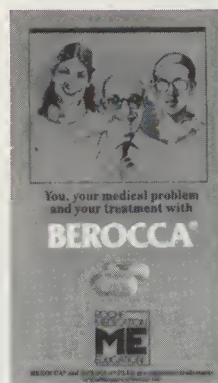
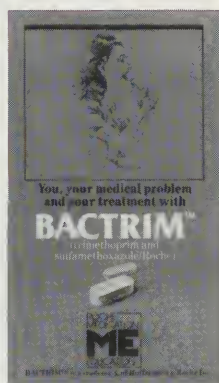
## ROCHE ME MEDICATION EDUCATION

Your Roche representative offers you access – without expense or obligation – to a comprehensive library of patient information booklets designed to supplement rather than supplant your rapport with your patients.

Each booklet helps you provide...

- Reinforcement of your instructions
- Enhancement of compliance
- Satisfaction with office visits

Your Roche representative will be happy to provide a complete catalog of available booklets and complimentary supplies of those that are applicable to your practice.





## A Clinical Moment With . . . Diabetes

### Management of a Juvenile Patient Who Resists Planned Diabetic Care

*Doctor: My eleven-year-old daughter developed diabetes about a year ago. At first she was very attentive about her diabetic care and adhered closely to her meal plan. Recently, she has been sneaking candy bars from vending machines and sometimes delaying her insulin injections. She has almost completely stopped doing blood glucose testing. How can I get her to take better care of herself?*

It is not unusual for diabetic patients, both children and adults, to be attentive and do well with diabetes management for a time, while later seeming to lose all interest in proper care. There are two approaches that should be used to cope with the situation. First, a good family counseling service should be contacted, and family group and individual meetings scheduled according to the service's recommendations. It is important that the family be involved and not just the child. Second, I would advise attendance at a summer camp for diabetic children. Fortunately, for Marylanders, Camp Glyndon is located near Reisterstown, Maryland. It is an excellent camp with extensive recreational and educational facilities. Peer influence and the training program are certainly helpful. I have never known anyone who attended a session who did not want to return the next year.

Camp Glyndon tuition is \$550.00 for a two-week session and \$260.00 for a one-week session, but every child may attend the camp through a liberal scholarship policy. Arrangements can be made for camping by contacting the American Diabetes Association, Maryland Affiliate, Inc., 2 Reservoir Circle, Suite 203,

Baltimore, MD 21208 (301-486-5515). The camping schedule for 1991 is:

Dates	Age Group
June 23 - July 5	13 - 15 years
July 7 - 12	Family session
July 14 - 26	10 - 12 years
July 28 - August 2	10 - 12 years
August 4 - 9	7 - 9 years
August 11 - 16	Family session

At this stage of a child's diabetic care, there is a greater than apparent amount of inner conflict and depression produced by the disease. Threatening measures and punishment are not helpful and should be avoided.

DeWITTE, DeLAWTER MD  
Editor

### A CLINICAL MOMENT WITH...

Physicians in all specialties are invited to submit synopses of current clinical problems in a question and answer format.

Write: **A Clinical Moment With...**  
*Maryland Medical Journal*  
**1211 Cathedral Street**  
**Baltimore, MD 21201-5585**

### Music Medicine Clearinghouse Volunteers

The Music Medicine Clearinghouse is looking for volunteers who can give a few hours a week to assist with the collection. Duties would include photocopying, filing, shelving, light typing, light data entry, etc. For further information, contact Susan Harman, Clearinghouse Coordinator, at 301-539-0872 or 1-800-492-1056 toll free in Maryland.

### MED CHI LIBRARY CHARGES

Effective May 1990

	Active Members	Affiliate, Associate, Fellow, and Resident Members
Borrowing from Book Collection	Free	Free
In-house Photocopying	5 articles free each month \$3.00 for each additional article	\$3.00 per article
Interlibrary Loans	\$3.00 per article plus charge from lending library	\$3.00 per article plus charge from lending library
Literature Searching	\$2.00 for each year searched	\$3.00 for each year searched
FAX surcharge	\$5.00 per article	\$5.00 per article

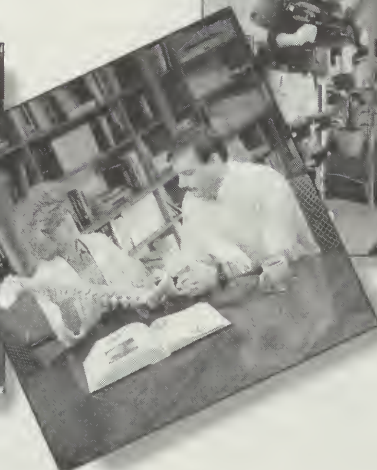
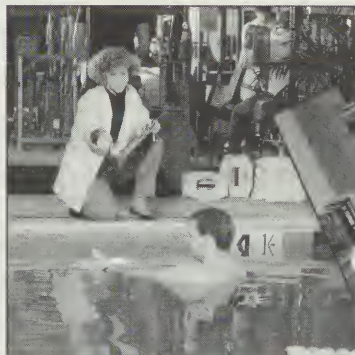


"MODERN REHABILITATION  
TAKES SOPHISTICATED  
EQUIPMENT AND THE  
EXPERTISE OF PHYSICAL  
THERAPISTS WHO NEVER  
FORGET THE HUMAN  
ELEMENT BEHIND EVERY  
PATIENT

CENTER PHILOSOPHY

WHEN THE PEOPLE WHO OWN A TREATMENT FACILITY ARE PHYSICAL THERAPISTS, IT SHOWS. AT THE MARYLAND CENTER FOR PHYSICAL THERAPY, IT SHOWS IN OUR STATE OF THE ART FACILITY AND IN THE FINEST EQUIPMENT AVAILABLE. AND IT SHOWS IN THE LEVEL OF PERSONAL CARE OUR DEDICATED PHYSICAL THERAPISTS PROVIDE.

SO WHETHER YOU NEED ORTHOPEDIC OR NEUROLOGICAL PHYSICAL THERAPY, OR TREATMENT FOR ARTHRITIS OR BACK PAIN, YOU CAN COUNT ON OUR EXPERTISE AND OUR CARING HANDS. LET US SHOW YOU THE SCIENCE AND ART OF THE HEALING PROCESS.



MCPT OWINGS MILLS • 2 PARK CENTER COURT, OWINGS MILLS, MD 21117  
301-363-7123 FAX 356-4153

MCPT HUNT VALLEY, P.A. • SHAWAN PLACE, 5 SHAWAN RD., HUNT VALLEY, MD 21030  
301-771-1777 FAX 771-1780

MARYLAND  
CENTER FOR  
PHYSICAL THERAPY





# Executive Director's Newsletter

April 1991

1991-1992  
Committee Select  
Cards Attached

---

## Physicians in the Persian Gulf

---

Med Chi would like to recognize some of Maryland's dedicated physicians serving in America's armed forces who have been called to action because of "Operation Desert Storm" in Saudi Arabia:

R. Stephen S. Amato MD  
Homer C. House MD

Bruce A. Feldman MD  
Christian E. Jensen MD

Med Chi recently received correspondence from Christian E. Jensen MD, President of the Caroline County Medical Society and Naval Reserve Physician, who was recalled to serve in Saudi Arabia. Dr. Jensen is serving in a forward area as a member of Fleet Hospital 15- First Marine Expedition Force. He says the emphasis is on rapid, appropriate intervention for wounds or illness and the health of our marines and sailors is splendid. He also sends greetings from a fellow Maryland physician, also with his unit, Bruce Feldman MD of Bethesda. He adds that Americans participating in the allied forces are united in being thankful for the opportunity to participate in this historic service to their country and its fighting men and women.

If you know of a colleague who has been called to serve, please contact Med Chi's Public Relations Department at 301-539-0872 or 1-800-492-1056.

---

## Med Chi Responds to Sun Article on Medicaid

---

On March 4, 1991, Med Chi sent a letter to the Editor of *The Baltimore Sun* in response to *The Sun's* article on Medicaid funding. In the letter (below), Med Chi President Reynaldo L. Lee-Llacer MD clarifies Med Chi's position regarding the intentions of physicians and the Department of Health and Human Services:

To the Editor:

It is unfortunate that the perception conveyed in *The Sun's* recent article on the Medicaid funding (*The Sun*, February 10, 1991: "Maryland Officials push 'scam' to double Medicaid funds") was so misleading regarding the intentions of physicians and the Department of Health and Human Services Medical Assistance Program, as to cause such widespread misunderstanding.

Acting Health Secretary Nelson J. Sabatini's announcement is in reality a reiteration of the requirement for physicians to follow Maryland Medicaid regulations. Under these regulations (COMAR 10.09.02.07C), "Physicians shall charge the Program their usual and customary charge to the general public for similar services." Since some physicians bill for the amount that Medicaid pays (which is often less than the physician's usual fee), Maryland's Medicaid program was receiving less than appropriate funding from the Federal Government.

Mr. Sabatini's request is neither a collusion, nor a scam. Inflammatory terms such as these, result not only in less than objective reporting but also do a disservice to our State Legislators, State Executives and Maryland physicians, by suggesting they would intentionally propose illegal actions.

Maryland physicians would never follow a program such as the one insinuated in *The Sun's* original article.

Reynaldo L. Lee-Llacer MD  
President

---

## Evening Sun Article on BPQA

---

Two articles on the Maryland Board of Physician Quality Assurance (BPQA) appeared in the March 1, 1991 edition of *The Evening Sun* ("Medical Board Flaws Persist, Records Show" and "State Board Slow to Detect Doctor Who Failed, Lied"). Med Chi physicians should note the articles are misleading in that they refer to activity that took place during the first year of the BPQA. During that year, Med Chi caught up with a backlog left over from the Commission on Medical Discipline. As of March 1, 1991,

Med Chi has only 30 peer review cases in process. Of these, only ten are beyond the 90-day time frame and all of these are on extensions. In light of these articles, physicians should note that Med Chi's position on peer review is and will remain that review of medical practices should only be done by physician peers. Med Chi will make every effort to insure that this activity remains with physicians.

---

## AMA Resolutions

---

At the 1990 Interim Meeting in Orlando, FL, the AMA House of Delegates adopted five resolutions relating to the new Medicare physician payment system. The AMA will:

- continue to endorse the basic concepts of the Resource-Based Relative Value Scale (RBRVS) study and to explore legislative and regulatory means to accurately reflect practice costs of individual specialties, including, but not limited to, additional payment for supplies or equipment of unusual cost or frequency;
- seek to influence the Medicare Volume Performance Standards (MVPS) to prevent them from becoming an expenditure target or cap via regulation or legislation;
- seek an orderly review and comment by the Federation of State Medical Societies on the final proposed payment schedule;
- do whatever possible to ensure that the RBRVS payment schedule does not include behavioral adjustments; and
- review current proposals for incorporating malpractice costs in the payment schedule so that physicians will be paid for these costs in a fair and equitable manner.

In addition, reports on the RBRVS study, Medicare physician payment reform, and geographic practice cost indices (GPCIs) were submitted for the information of the House.

---

## Medicare Claims Reminder

---

Effective September 1, 1990, physicians and suppliers have been required by *law* to submit claims on behalf of Medicare beneficiaries. This requirement applies to assigned and unassigned claims. Physicians or suppliers may *not* charge for preparing and filing claims, and all claims must be submitted on the standard HCFA-1500 claim form.

---

## Ambulatory Surgery Center Services

---

Effective immediately, HCFA has established the new modifier code, "QL," to identify ambulatory surgery center services on Medicare claims. This modifier code must be shown with the appropriate procedure code on all Medicare claims for these facilities.

---

## HCFA Project

---

HCFA is involved in a demonstration project which started March 1, 1991 and is continuing through March 31, 1992. This project involves releasing national screens that Medicare's insurance carriers use for prepayment review. The project will determine if releasing these screens influence physician behavior.

Seven national screens will be studied--routine foot care, comprehensive office visits, skilled nursing facility visits, chiropractic visits, intermediate hospital visits, consultations, and comprehensive visits in all settings. However, the number and choice of screens to be released will vary from carrier to carrier. The carriers involved in this project are from Alabama, Arkansas, California, Colorado, Connecticut, Georgia, Idaho, Indiana, Kansas, Kentucky, New York, Texas, and Wisconsin.



---

## Revised Faculty Position on AIDS

---

---

## Physician's Practice Digest

---

---

## Committee Selection Cards for 1991-1992

---

---

## 1991 Annual Meeting

---

In February, the Executive Committee approved a revised Faculty Position on AIDS dealing with many aspects of the AIDS issue including testing of health care workers and patients, the physician's duty to treat, and improving access to care. For copies of the Faculty Position on AIDS or for copies of any other Faculty Position Paper, contact Med Chi's communications department at 301-539-0872 or 1-800-492-1056.

Later this month, Med Chi physicians will receive the spring issue of the *Physician's Practice Digest (PPD)*, Med Chi's new quarterly publication designed to meet the practice management needs of your medical practice. The theme of this issue is "Prescription for Recession" and features useful financial information for the 1990s. If you have any suggestions, opinions or an interest in contributing articles to the summer issue of *PPD*, please send correspondence to Editor, *Physician's Practice Digest*, 1211 Cathedral Street, Baltimore, MD 21201.

Med Chi thanks all physicians who have submitted postcards to serve on Med Chi committees during 1991-1992. Terms for these committees will run from May 11, 1991 until the last day of the annual meeting in May 1992.

For those members presently serving on Med Chi committees, please note that you serve on a committee for ONE YEAR ONLY. Unless otherwise specified in the Bylaws, CURRENT COMMITTEE APPOINTMENTS END ON THE LAST DAY OF THE 1991 ANNUAL MEETING (MAY 11).

To be appointed for a committee during 1991-1992, please indicate your committee preference(s) on the postcard following this newsletter.

The President will send letters to members appointed to committees in 1991-1992 after the annual meeting in May. (Some committee members may be required to serve after the annual meeting until the President can appoint a new committee.)

Med Chi thanks its members for their support of Med Chi and its committee work. It is only through the dedicated hard work of its volunteer physicians that Med Chi can continue to serve as an advocate for physicians and help improve health care for all Maryland citizens.

Physicians are reminded to preregister for Med Chi's 1991 Annual Meeting, "American Medicine Today, Perspectives from Maryland." A preregistration form is featured on page 288 of this *MMJ*. The meeting will be held on Wednesday, May 8 thru Saturday, May 11, 1991 at the University of Maryland Center of Adult Education in College Park, Maryland.

Special Guest Speakers to Attend Med Chi's Annual Meeting include:

- AMA President John C. Tupper MD who will address the entire membership;
- Senator John D. Rockefeller, IV (D-WV) who will speak Friday evening, May 11, at the Presidential Ball;
- The Reverend Joseph A. Sellinger, President of Loyola College, Maryland who will speak at the Prayer Breakfast on Thursday, May 9th;
- Mrs. Marilyn Quayle, National Breast Cancer Spokesperson\*;
- Mrs. Elizabeth Dole, President of the American Red Cross\*;
- Former Surgeon General C. Everett Koop MD\*.

Scientific sessions for this year's meeting include *HIV Today: Transmission, Testing and Treatment*; *Managing Diabetes in the 1990s*; *How to Help Your Pregnant Patients Stop Smoking*; *The Right to Die in Maryland 1991 (After Cruzan)*; *Treatment of Outpatient Infections*; and *Treatment of Chronic Pain in Patients with Advanced Cancer*.

\*Accepted invitation to meeting, coordinating schedules

Entertainment for this year's meeting includes a performance by the Capitol Steps, a political cabaret troupe from Washington, on Wednesday May 8. A PGA-celebrity golf tournament is planned for Thursday May 9. There will also be a dinner honoring Med Chi President Reynaldo L. Lee-Llacer MD on Friday, May 10. Call now to make your reservations for these events.

For more information on the Annual Meeting, call Michael Moran at 301-539-0872 or 1-800-492-1056.

---

### *New Address for Physician Rehabilitation Program*

---

Med Chi's Physician Rehabilitation Program is pleased to announce the relocation of its offices as of March 1, 1991. They have moved directly behind the Faculty Building to 1204 Maryland Avenue, Baltimore, MD 21201. Their new phone numbers are (301) 962-5580 and 1-800-992-7010 (toll-free). The program's 24-hour message line number remains the same: 301-727-0120

---

### *Medical Mutual's New MedGuard Coverage*

---

Medical Mutual now offers MedGuard Coverage to help physicians pay for the cost of retaining an attorney to defend them against disciplinary proceedings. Your current Medical Mutual professional liability policy already pays the cost of defending you against lawsuits involving allegations of medical malpractice by a third-party plaintiff or damages caused by your participation as a "judge" in a peer review process. The new MedGuard program will provide legal counsel if you are the subject of disciplinary proceedings. These proceedings can include hospital and/or HMO/PPO peer review, local and state society peer review, state licensure and disciplinary boards, National Practitioner Databank, Professional Review Organizations (PRO), and Medicare actions. MedGuard coverage is optional and is available for Medical Mutual members only. Coverage is available for individual professionals or professional organizations. If you wish to purchase MedGuard coverage, it will be added to your existing Medical Mutual policy. For more information about MedGuard, contact your Medical Mutual member service representative at 785-0050 or 1-800-492-0193.

---

### *Women In Medicine*

---

All Med Chi members are invited to attend the next meeting of the Women in Medicine Committee on April 18, 1991 at 6:30 p.m. in the Med Chi Faculty Building. Discussion topics for this meeting will include issues of interest to women physicians. Members are encouraged to bring a non-member guest with them to the meeting. If you plan to attend this meeting, contact Betsy Newman, Public Relations department at 301-539-0872 or 1-800-539-0872. (Please indicate if you require babysitting.)

---

### *Photo Contest*

---

All Med Chi physicians and auxiliary members are invited to express their photographic talents in the 1991 Med Chi Photo Contest. First and second prizes will be awarded for black and white and for color photographs and all entries will be displayed during the 1991 Annual Meeting at the University of Maryland Center for Adult Education in College Park. Deadline for entries is April 19, 1991. For more details on the contest, see the ad on page 302.

  
Angelo J. Troisi, F.A.C.H.E.  
Executive Director



**I**f effectively meet your needs as a Maryland physician, Med Chi must maintain an extensive framework of committees to uphold prior commitments, manage current programs, and formulate new policy. It is essential that these committees be comprised of interested members so that Med Chi will remain a strong, viable, and active organization.

Please indicate your willingness to serve by checking your committee preference and special interests on the reply card. Every effort will be made to appoint you to the committee of your choice.

I intend to appoint as many members as possible to committees to insure Med Chi's continued growth as the leading voice for medicine in Maryland.

Thank you for your support.  
J. David Nagel MD  
President-elect

I am interested in serving on the following Med Chi committees.

- ☐ AIDS Committee
- ☐ Alcoholism and Chemical Dependency Committee
- ☐ Computers in Medicine Committee
- ☐ Continuing Medical Education Review Committee
- ☐ Drugs Committee
- ☐ Emergency Medical Services Committee
- ☐ Finance Committee
- ☐ Hospital Medical Staffs Committee
- ☐ Insurance Fund of Med Chi Committee
- ☐ Legislative Committee
- ☐ Liaison Committee with Medical Assistance Program
- ☐ Library and History Committee
- ☐ Long Term Care and Geriatrics Committee
- ☐ Managed Care and Third Party Liaison Committee
- ☐ *Maryland Medical Journal* Editorial Board
- ☐ Medicine and Religion Committee
- ☐ Mediocolegal Committee
- ☐ Other Interests: \_\_\_\_\_

- ☐ Mental Health Committee
- ☐ Music Medicine Clearinghouse Committee
- ☐ Occupational Health Committee
- ☐ Peer Review Committee
- ☐ Physician/Patient Relations Committee
- ☐ Physician Rehabilitation Committee
- ☐ *Physician's Practice Digest* Editorial Board
- ☐ Professional Ethics Committee
- ☐ PRO Monitoring Committee
- ☐ Public Health Committee
  - ☐ Immunization and Infectious Diseases Subcommittee
  - ☐ Infant, Child & Adolescent Health Subcommittee
  - ☐ Maternal Welfare Subcommittee
  - ☐ Sports Medicine Subcommittee
- ☐ Public Relations Committee
- ☐ Small Area Practice Variations Committee
- ☐ Specialist Identification Committee
- ☐ Specialty Societies Committee
- ☐ Young Physicians Committee

Name: \_\_\_\_\_

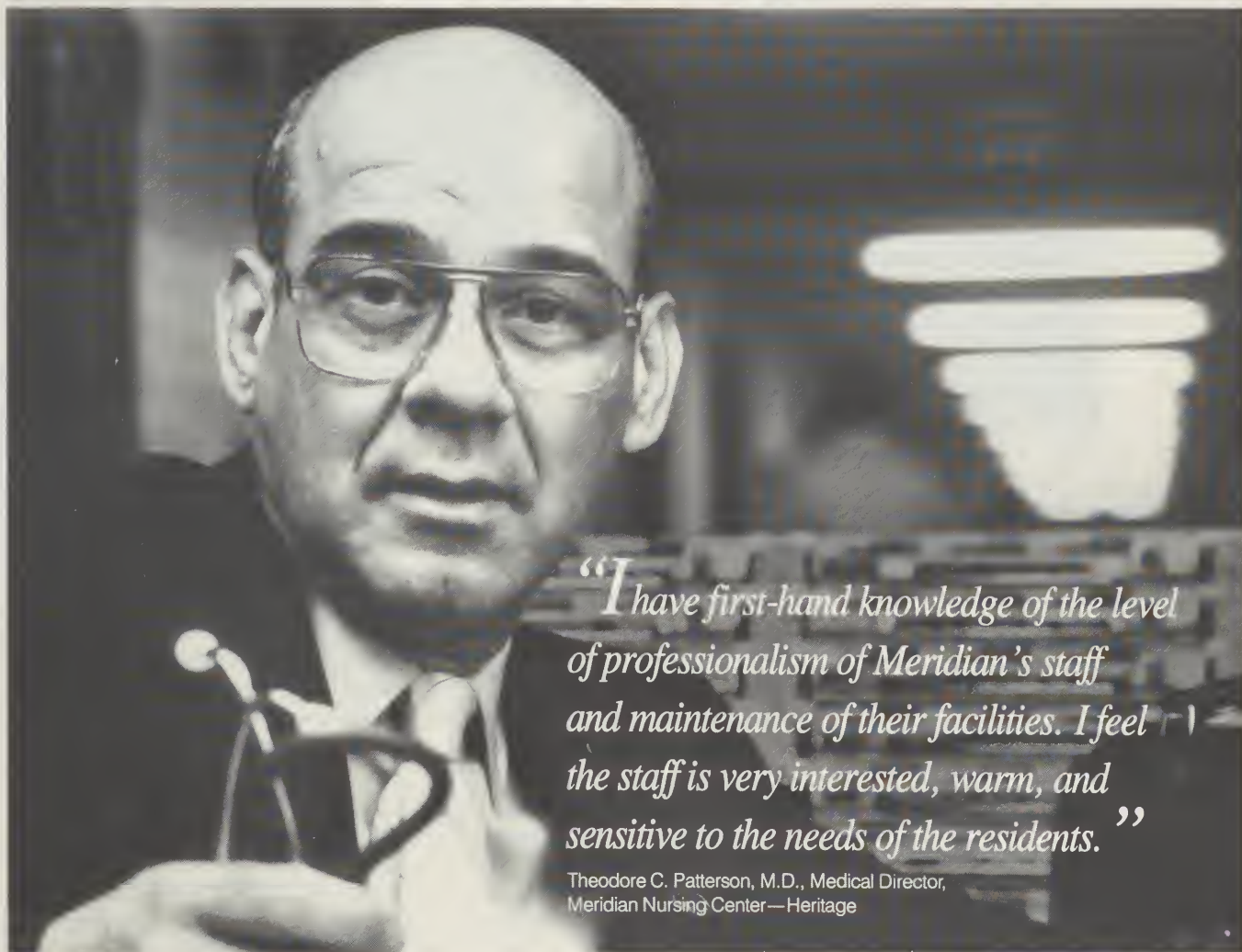
Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_ County: \_\_\_\_\_

**Place  
Stamp  
Here**

Medical and Chirurgical Faculty of Maryland  
1211 Cathedral Street  
Baltimore, Maryland 21201-5585





*"I have first-hand knowledge of the level of professionalism of Meridian's staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents."*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### ***Partners in Healthcare***

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer's patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there's our full-time activity directors, social workers, and dietitians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.



# MRI UPDATE



Figure 1

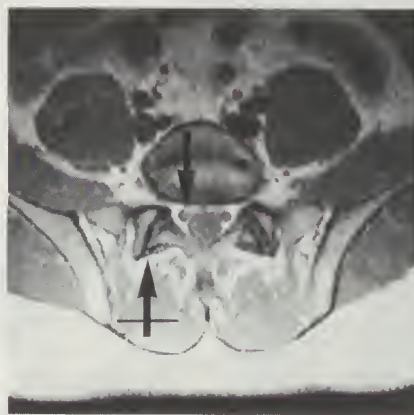


Figure 2

**CLINICAL HISTORY:** This is a 26-year-old male with back pain and right lower extremity radiation.

**FINDINGS:** This is an example of a normal study on a young adult. **COMMENT:** MRI is the screening test of first choice for suspected disorders of the lumbar spine. Notice the clear depiction of the normal L5-S1 disc (figure 1, crossed arrow). The discs of this patient exhibit high signal intensity reflecting normal hydration and none of the discs are narrowed. None of the discs indent the thecal sac which is of intermediate signal intensity and appears as the gray band in the center

of the image. The vertebral bodies are homogeneous and free of destructive lesions. The conus medullaris (arrow) is normal. This sagittal image demonstrates the advantages of MRI over other screening modalities. Routine CT scanning will not display the conus medullaris, lesions of which may masquerade as disc herniation. The general area of coverage is superior with MRI. Disc detail is much better displayed with MRI.

The axial image at L5-S1 (figure 2) exhibits delineation of intraspinal detail far superior to that of CT. The right S1 nerve root is clearly displayed (arrow) surrounded by normal perineural fat

which is the bright high intensity material in the periphery of the spinal canal. State-of-the-art MR images clearly display the bony anatomy of the lumbar spine including the facet joints (crossed arrow). Degenerative diseases and bony neoplasm are routinely detectable.

MRI involves no ionizing radiation and no intrathecal contrast material is needed. It is a patient-friendly outpatient examination well suited for screening purposes.



**Maryland  
Magnetic  
Imaging**

900 Toll-House Avenue  
Frederick, MD 21701  
(301) 662-0077

Health Images facilities operate their MRI systems with all available upgrades including contiguous thin slices, high resolution head and body coils, state of the art surface coils, and cardiac gating.

Health Images facilities are a community resource available to all area physicians.



*Health Images, Inc.®*





## EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

April 1991

### LYME DISEASE UPDATE

Test your knowledge about Lyme disease! Match the correct response(s) from the column on the right with the question on the left; note that several questions have more than one correct response. Responses may be used once, more than once, or not at all.

#### Questions:

1. List Maryland counties in which Lyme disease is endemic:  
\_\_\_\_\_
2. List features that are sufficient for diagnosis of Lyme disease:  
\_\_\_\_\_
3. List complications of Lyme disease:  
\_\_\_\_\_
4. The causative agent of Lyme disease is : \_\_\_\_\_
5. Species important in the maintenance of Lyme disease are: \_\_\_\_\_
6. Risk factors for Lyme disease include: \_\_\_\_\_
7. List measures that are useful in preventing Lyme disease:  
\_\_\_\_\_
8. Antibiotics used to treat Lyme disease include : \_\_\_\_\_

#### Answers:

- a. The white-tailed deer
- b. Arthritis
- c. Howard County
- d. Baltimore County
- e. *Borrelia burgdorferi*
- f. *Aedes aegypti*
- g. Outdoor activities
- h. Erythema migrans
- i. The white-footed mouse
- j. Cardiac conduction abnormalities
- k. Frequent tick checks
- l. Positive Lyme disease serology
- m. Renal failure
- n. Encephalitis
- o. Amoxicillin
- p. Light colored clothing
- q. *Ixodes dammini*
- r. Aztreonam
- s. Pets
- t. Bell's palsy
- u. Tick exposure
- v. Doxycycline
- w. Cecil County
- x. Insect repellent
- y. *Francisella tularensis*
- z. Prince George's County

## How well did you do?

1. Lyme disease is considered to be endemic in Howard (c), Baltimore(d), Cecil (w) and, Prince George's (z) counties. In fact in 1991, Lyme disease is considered endemic in all parts of Maryland except for the western counties.

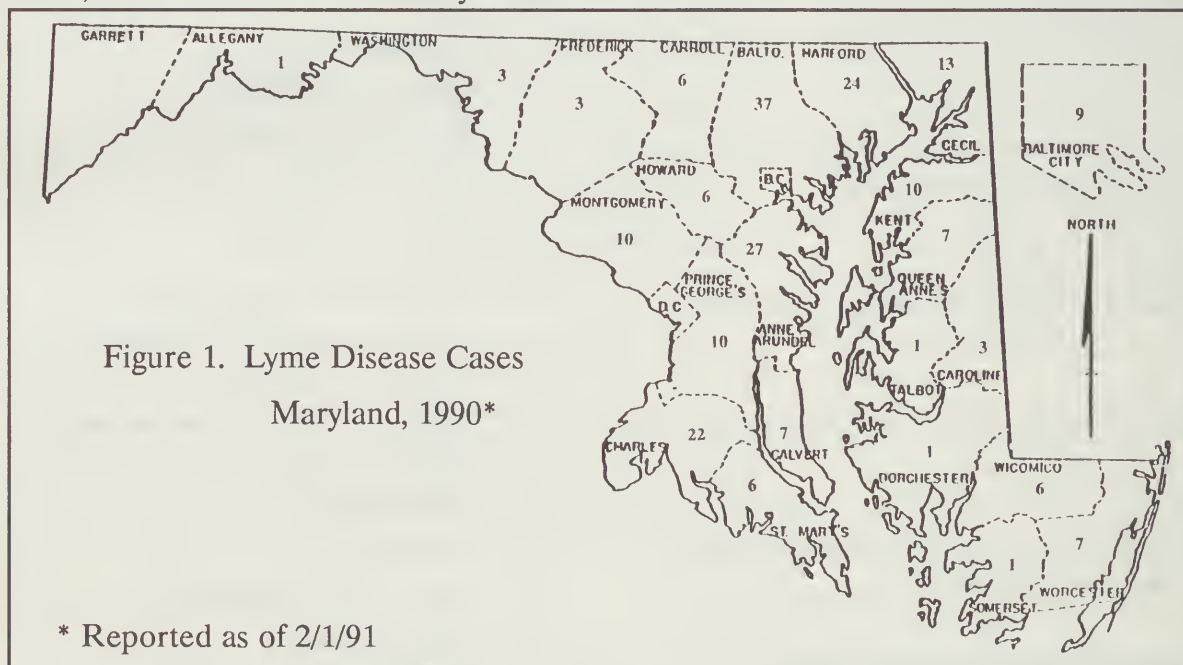
Lyme disease is the most prevalent vector-borne illness in the United States. Lyme disease is endemic (present constantly even if at low transmission rates) in most of the United States, including most of Maryland, although the majority of cases (94%) of Lyme disease reported to the Centers for Disease Control (CDC) in 1987 and 1988 (the last years for which data are available) came from nine states: New York, New Jersey, Wisconsin, Connecticut, Pennsylvania, Rhode Island, California, Massachusetts and Minnesota<sup>1</sup>. In 1989, there were 138 cases of Lyme dis-

rett (Figure 1). The counties with the highest number of cases were Baltimore, Anne Arundel, Harford and Charles; cases from these four counties represented 50% of the Maryland total.

Lyme disease was added to the list of reportable infectious diseases in Maryland in 1989; therefore, all confirmed and suspected cases should be reported to your local health department on a Maryland Confidential Morbidity Report card (DHMH-1140).

2. Erythema migrans (h) is sufficient for the diagnosis of Lyme disease. Positive Lyme serology (l) and self-reported tick exposure (u) are not sufficient for diagnosis of Lyme disease.

Erythema migrans (EM, formerly known as erythema chronicum migrans, or ECM) is the classic rash of Lyme disease, which



ease reported in Maryland; the data for 1990 are not yet complete, but so far 220 confirmed cases have been reported. This number includes only those reported cases that met the CDC surveillance case definition. It is likely that the true number of cases that occurred in Maryland last year was much higher.

In 1990, there were confirmed Lyme disease cases reported from residents of Baltimore city and all counties except Gar-

rett when present in an endemic area, is sufficient for diagnosis. EM develops in 60-80% of patients, usually a few days after the tick bite, but sometimes up to one month later. The rash usually starts at the site of the tick bite, as a red patch which expands centripetally. The patch usually has central clearing, and has been described as a bull's-eye or a target lesion; there may be multiple lesions. For Centers for Disease Control surveillance



purposes, EM must measure at least 5 cm. The rash may be warm but is usually not raised, painful or itchy. Other early symptoms of Lyme disease include fever, headache, fatigue, myalgias and regional lymphadenopathy.

A positive serologic test alone is not sufficient for diagnosis of Lyme disease, and, likewise, a negative serologic test does not rule out Lyme disease, for several reasons:

- a) It takes IgM 3-6 weeks to peak after illness onset, and IgG even longer, so serologic tests at the time of EM or other early symptoms are likely to be negative.
- b) Treatment with antibiotics, recommended during the early stages of the disease to prevent late complications, may interfere with the development of antibodies, so that even convalescent serology may be negative.
- c) The commercial tests currently available, indirect fluorescent antibody (IFA) and enzyme-linked immunosorbent assay (ELISA) have been shown to be unreliable from laboratory to laboratory, and even within the same laboratory<sup>2</sup>.

A history of tick bite, without symptoms of Lyme disease, is not sufficient to predict development of Lyme disease. Due to the small but real risk of adverse effects from unnecessary antibiotic use, it is not routinely recommended to treat patients with tick bites prophylactically with antibiotics.

**3. The complications of Lyme disease include arthritis (b), cardiac conduction abnormalities (j), encephalitis (n), and Bell's palsy (t). Renal failure (m) is not a common complication of Lyme disease.**

The organ systems most likely to be affected by complications of Lyme disease are the joints, the nervous system, and the heart.

Arthritis of one or more joints is the most common late complication of Lyme disease. Neurologic complications include Bell's palsy, carpal tunnel syndrome,

peripheral polyneuropathy, optic neuritis and encephalitis. Cardiac complications include cardiac conduction abnormalities, often involving the AV node, tachycardia and palpitations.

Late symptoms usually appear months after exposure, and often require intensive parenteral antibiotic therapy. Even when aggressively treated, these complications may become chronic.

**4. The organism which causes Lyme disease is the spirochete *Borrelia burgdorferi*(e). *Francisella tularensis* (y) is the organism responsible for tularemia and is incorrect.**

**5. The white-tailed deer (a), the white-footed mouse (i) and *Ixodes dammini* (q) are species important in the maintenance of Lyme disease; *Aedes aegypti* (f) is not.**

The primary vector for transmitting the spirochete *Borrelia burgdorferi* to humans is the deer tick, *Ixodes dammini*, although the spirochete has been found in other species of tick. *Ixodes dammini* feeds on the white-footed mouse during its nymphal stage, and feeds on the white-tailed deer as an adult. The nymphal tick, which is found in the spring and early summer, is thought to be more important than the adult tick in transmitting Lyme disease, but the adult tick can also transmit the disease, so cases may occur through the fall. Humans are incidental hosts to *Ixodes* ticks, and are not important in their life cycle.

*Aedes aegypti* is a species of mosquito, which has a role in the transmission of yellow fever, but has nothing to do with Lyme disease.

**6. Risk factors for Lyme disease include outdoor activities (g) and tick exposure (u). Pets (s) are only speculated to be a risk factor.**

The major risk factor for development of Lyme disease is exposure to outdoor areas where *Ixodes* ticks are found. Outdoor activities, especially in wooded areas, but potentially in any unpaved areas, has been shown to be a risk factor for Lyme disease<sup>3,4</sup>. Other high risk activities in-

clude hunting, fishing, and camping. Only half the patients who develop EM recall a recent tick bite. As a result, self-reported tick exposure is not well correlated with true tick exposure, and many studies have shown that patients with Lyme disease deny a preceding tick bite.

Studies detecting antibody to tick salivary antigen (ATSA), a new serologic tool for detection of recent exposure to *Ixodes dammini*, have shown that people are not accurate in their assessment of tick exposure<sup>5</sup>. ATSA has promise as a research tool in defining populations at risk for development of Lyme disease, as well as a means to determine the effectiveness of measures designed to reduce exposure to ticks. Pet ownership has not yet been demonstrated in epidemiologic studies to be a consistent risk factor for Lyme disease.

**7. Measures useful in preventing Lyme disease are frequent tick checks (k), wearing light colored clothing (p), and using insect repellant (x).**

Lyme disease can be prevented by preventing tick bites. When in an area where exposure to ticks is likely (any wooded area in Maryland), a combination of several preventive measures may be useful:

- a) wearing light colored clothing so that ticks can be seen;
- b) frequent tick checks;
- c) covering as much skin as possible (hats, long sleeves, long pants, shoes and socks instead of sandals); and
- d) using insect repellents.

**8. Antibiotics used to treat Lyme disease include amoxicillin(o) and doxycycline (v). Aztreonam (r) is not used to treat Lyme disease.**

Oral antibiotic therapy is very effective in treating the early manifestations of Lyme disease; recommended antibiotics are doxycycline or amoxicillin<sup>6</sup>. Although a longer course is required, these are also the drugs recommended for mild late neurologic or cardiac complications, for example, Bell's palsy or first degree AV block with PR interval for less than 0.30 seconds.

For serious and late neurologic or cardiac complications, such as encephalitis or heart block, parenteral therapy with penicillin G or ceftriaxone is recommended. Lyme arthritis may be recalcitrant to treatment with antibiotics, but usually improves gradually; more than one course of antibiotics is sometimes needed, with alternative drugs used in cases of treatment failure.

Aztreonam is most effective in treating infections caused by gram-negative bacteria, and has no place in the treatment of Lyme disease.

#### References

1. CDC. Lyme disease - United States, 1987 and 1988. MMWR 1989;38:668-672.
2. Schwartz BS, et al. Antibody testing in Lyme disease: a comparison of results in four laboratories. JAMA 1989;262:3431- 3434.
3. Schwartz BS, et al. Lyme disease in outdoor workers: risk factors, preventive measures, and tick removal methods. Am J Epidemiol 1990;131:877-885.
4. Goldstein MD, et al. Lyme disease in New Jersey outdoor workers: a statewide survey of seroprevalence and tick exposure. AJPH 1990;80:1225-1229.
5. Schwartz BS, et al. Anti-tick antibodies: an epidemiologic tool in Lyme disease research. Am J Epidemiol 1990;132:58-66.
6. Treatment of Lyme disease. Medical Letter 1989;31:57-59.

Prepared by Marianne Cloeren, M.D., M.P.H., Johns Hopkins School of Hygiene and Public Health.

The Maryland Department of Health and Mental Hygiene is planning a joint project with investigators from Johns Hopkins School of Hygiene and Public Health to determine the risk factors of Lyme disease cases in Maryland. Because this study involves, in part, time-dependent serologic testing of patients with Lyme disease, physicians are encouraged to:

**Report suspected cases of Lyme disease as soon as possible to the local health department.**



### The Prognostic Value of Mononucleated Cell Levels in Cancer Patients

It has long been accepted that a primary part of the host's defense mechanism against cancer is immunologic in nature. Human subjects and experimental animal models do produce antibodies, or more specifically, sensitized cytotoxic lymphocytes directed against neoplasms.<sup>1-7</sup> It has also been reported that the intensity of lymphocytic action in and around a tumor and the activity of local lymph nodes correlate directly with the patient's prognosis and inversely with the probability of metastases.<sup>8-10</sup> Patients with cancer who are unable to mobilize an immune response have more metastases and a worse prognosis than patients who are immune suppressed.<sup>11,12</sup> Suppression of the immune response in humans and animals correlates with an increased incidence of many types of cancer. Hellstrom and colleagues<sup>7</sup> were the first to describe specifically sensitized anti-tumor lymphocytes. However, less attention has been paid to the absolute counts of mononucleated cells in the peripheral blood, which are the immune modulators.

We studied fifty-five patients with histologically proven primary epidermoid carcinoma of the head and neck region who were treated surgically. All patients were in satisfactory nutritional status, their actual weights were within the ideal range, and their serum albumin levels were 3.5 g/dl or higher. Fourteen patients had stage I or II disease characterized by primary tumors up to 4 cm in diameter with no palpable regional lymph nodes. They were treated with wide resection of the primary disease with pathologically proven negative tumor margins. The other forty-one patients had stage III or IV disease with primary tumors over 4 cm. They were managed by wide resection of the primary disease and radical neck dissection followed by radiation therapy. Ten patients were found to have no regional lymph node metastases, whereas the other thirty-one patients had regional lymph node metastases ranging in size from 1 to 6 cm on one or both sides of the neck.

Peripheral blood samples were obtained from each patient for complete blood counts and differential counts at the time of diagnosis, before surgery, and before any therapy. Data were expressed as the percentage of lymphocytes and monocytes rather than as actual counts to avoid the large variations due to the absolute white cell count, which ranged from  $4-12 \times 10^3$  cells per cubic millimeter. These data were then correlated with the stage of the disease, length of disease-free survival, patient's age, and sex.

The results revealed that the initial lymphocyte percentages (i.e., prior to any therapy) correlated with the stage of the disease. Patients with stage I or II disease had a mean lymphocyte percentage of 33 percent, while those with stage III or IV disease with negative lymph nodes had a lymphocyte percentage of 26 per-

cent. Data analysis revealed that the p value equaled 0.104, which was not statistically significant. However, the lymphocyte percentage for patients with stage III and IV disease with metastases to the regional lymph nodes was 23 percent. The data analysis comparing the lymphocytes of patients with negative lymph nodes to those with positive lymph nodes resulted in a significant p value equal to 0.006. On the other hand, patients with stage I and II disease had a mean monocyte count of 5.4 percent compared to 8.3 percent for those with stage III and IV disease with negative lymph nodes ( $p = 0.04$ ). Furthermore, patients with stage III and IV disease with positive lymph nodes had a mean monocyte count of 9.3 percent with a statistically significant p value equal to 0.028 when compared to the monocytes of the other two groups.

Patients with 30 percent or more lymphocytes had a recurrence rate of 13.6 percent during the first year, whereas those with less than 30 percent had a 69 percent recurrence rate during the same period; this was irrespective of the stage of disease ( $p = 0.0003$ ).

These data suggest that the initial peripheral mononucleated cell values correlate with the stage of the disease and the recurrence rate in the first year after definitive therapy, regardless of age and sex. In addition, it should be noted that obtaining lymphocyte and monocyte counts is an inexpensive test performed routinely in every clinical laboratory, and does not require any special or expensive immunologic facilities.

Although we cannot hypothesize whether the decreased lymphocyte and increased monocyte values follow or precede progression of the disease, periodic monitoring of the mononucleated cell levels during follow-up of such patients could reflect on the recurrence and survival rates.

In summary, while it has been established that the stage of the disease at the time of diagnosis carries the most significant prognostic factor, it seems that other prognostic factors at the time of diagnosis may play an additional prognostic role. It also seems that higher lymphocyte values in cancer patients carry a better prognosis. Conversely, higher monocyte values correlate with poor prognosis. Such observations should be monitored in every clinical practice.

### References

1. Finney JW, Byers EH, Wilson RH. Studies in tumor auto-immunity. *Cancer Res* 1960; 20:351-6.
2. Gold P. Circulating antibodies against carcinoembryonic antigens of the human digestive system. *Cancer* 1967; 20:1663-7.
3. Graham JB, Graham RM. Antibodies elicited by cancer in patients. *Cancer* 1955; 8:409-16.
4. Morton DL, Malmgren RA, Holmes EC, Ketchman AS. Demonstration of antibodies against human malignant melanoma by immunofluorescence. *Surgery* 1968; 64:233-40.
5. Bubenik J, Perlman P, Helmstein K, Moberger G. Immune



## When it's time to send in The Special Team.

Here at PSA Financial Center, we utilize a team approach to financial problem solving, and we put together special teams as they are required to deal with special situations.

PSA Professional Liability, Inc., for example, specializes in Medical Malpractice Insurance. Our associates can call upon both in-house staff and outside specialists for their expertise when needed. And because our clients have confidence in our special teams, PSA Professional Liability is now among the largest Malpractice Insurance Agencies in Maryland.

Contact any of our affiliates to enjoy the satisfaction that comes from having a team of financial service specialists working for you.

PSA Professional Liability, Inc.  
Malpractice Insurance



PSA Capital Management, Inc.  
Investment Management

PSA Financial Advisors, Inc.  
Financial Planning

PSA Financial Center

PSA Pension Services, Inc.  
Design & Administration

PSA Financial, Inc.  
Employee Benefits

North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

PSA Insurance, Inc.  
Agents & Brokers

PSA Equities, Inc.  
Broker / Dealer

PLANNING FOR OUR CLIENTS FINANCIAL FUTURE  
SINCE 1928



## THE MRI CENTER AT MARYLAND GENERAL HOSPITAL — A NEW RESOURCE FOR MARYLAND PHYSICIANS

Maryland General Hospital has installed a Picker Vista MRI 1.0 Telsa Scanner. This system permits high resolution, thin slice imaging capability and small fields of view, all with superior image quality.

Our System and services offer many benefits to area physicians...

- Convenient patient appointments.
- A dictaphone voice retrieval system which allows instant access to dictated MRI reports from any telephone including home, office or even car phones.
- A large magnet gantry and table to accommodate large or obese, and claustrophobic patients up to 300 lbs.
- Twenty-four hour or less report turn around.
- A financial counselor to facilitate MRI payments.
- Actual copy of study available to physician upon request.

The MRI Center at Maryland General Hospital  
827 Linden Avenue Baltimore, Maryland 21201  
301-225-8121



- EXTRA and the "Thermolds" shoes
- Accomodative, impression molded inlays, for proper weight distribution, made of PLASTIZOTE or PELITE
- Complete line of SPENCO products
- Custom MOLDED footwear as required
- Outside fitting in home or hospital
- Also—Complete prescription service, including many special purpose shoes and shoes suitable for brace attachment

DEPTH new

## ZIMMERMANN'S SHOES

227 W. Saratoga St.  
Baltimore, MD 21201

(301) 685-3665

Hours: 9 am—5 pm MTWTF  
Thursday til 7 pm

### New Location:

558G Ritchie Hwy.  
Severna Park, MD 21146

(301) 554-1302

Hours: 10 am—6 pm MTWFS  
Thursday & Friday til 8 pm

Charles E. Brown, Certified Pedorthist  
Member, Prescription Footwear Association

response to urinary bladder tumours in man. *Int J Cancer* 1970; 5:39-46.

6. Chu E, Stjernsward J, Clifford P, Klein G. Reactivity of human lymphocytes against autochthonous and allogeneic normal and tumor cells in vitro. *J Natl Cancer Inst* 1967; 39:595-617.

7. Hellstrom IE, Hellstrom KE, Pierce GE, Yang JP. Cellular and humoral immunity to different types of human neoplasms. *Nature* 1968; 220:1352-4.

8. Berg JW. Inflammation and prognosis in breast cancer. *Cancer* 1959; 12:714-20.

9. Black MM, Speer FD. Sinus histiocytosis of lymph nodes in cancer. *Surg Gynecol Obstet* 1958; 106:163-75.

10. Black MM, Speer FD. Lymph node reactivity in cancer patients. *Surg Gynecol Obstet* 1960; 110:477-87.

11. Eilber FR, Morton DL. Impaired immunologic reactivity and recurrence following cancer surgery. *Cancer* 1970; 25:362-7.

12. Solowey AC, Rapaport FT. Immunologic responses in cancer patients. *Surg Gynecol Obstet* 1965; 121:756-60.

### E. GEORGE ELIAS MD, PhD

Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland Medical System

Tumor Conferences are held weekly on Tuesdays between 8 and 9 a.m. in Room S9A06 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call 301-328-5224 by noon Monday to be placed on the schedule: Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD 21201. ■



---

# Harbor Hospital Center: Preparing Physicians for the Future

---

Colen Heinritz MD

---

*Dr. Heinritz is Director of Medical Education, Harbor Hospital Center, Baltimore, MD.*

I am pleased to introduce in this issue the investigative work of residents at Harbor Hospital Center. Graduate education gives residents the opportunity to investigate and report interesting clinical observations. Our faculty encourages and assists all residents in preparing papers for submission to medical journals and for presentation at Maryland's annual American College of Physician Associates meeting.

In this issue, Drs. Weiss and Hrehorovich describe a previously unreported urethral involvement which heralded the reactivation of Wegener's disease ten years after initial chemotherapy. Dr. Dart and colleagues document the lack of prognostic efficacy of the widely used and highly regarded APACHE II for patients with cancer. Drs. Riaz and Selonick prospectively documented a 44 percent incidence of myocardial infarction in patients admitted to cardiac care units with pulmonary edema. Drs. Alegado and Mardelli report the apparent successful treatment of postpartum cardiomyopathy with immunosuppressive agents. Dr. Conrado emphasizes the need for prompt recognition of spontaneous splenic ruptures in non-Hodgkin's lymphoma.

Our house staff and faculty are pleased to share their work with *Maryland Medical Journal* readers and thank *MMJ* for this opportunity.

---

The *MMJ* will contain additional papers from residents at Harbor Hospital Center in the May issue.

# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.



*Lumbar Spine*

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)



---

# An Unusual Manifestation of Wegener's Granulomatosis

---

Robert D. Weiss MD and Victor R. Hrehorovich MD

---

*Dr. Weiss is completing a Pulmonary Critical Care Fellowship at the University of Pittsburgh Medical Center, Pittsburgh, PA. Dr. Hrehorovich is Director of the Department of Medicine, Harbor Hospital Center, Baltimore, MD.*

**W**egener's granulomatosis is a rare vasculitis usually affecting the respiratory tract and the kidneys. We recently had the opportunity to manage a patient presenting with an unusual manifestation of this disease ten years after the initial diagnosis.

---

*Unusual manifestations of Wegener's granulomatosis, such as urethral involvement, should be treated aggressively to prevent full-blown reactivation of the disease.*

---

## Case Presentation

G.L. is a seventy-three-year-old male who presented with hematuria of three-weeks duration in 1988. Wegener's granulomatosis had been diagnosed by lung biopsy in 1978 after a chest x-ray revealed multiple pulmonary nodules and diffuse infiltrates. The medical history was also significant for hypertension, transurethral resection of prostate for benign prostatic hypertrophy, hemorrhagic cystitis, hydronephrosis, angina pectoris, and urinary tract infection. Medications included atenolol and prazosin. Physical exam revealed a well-developed, well-nourished male in no apparent distress with stable vital signs and a positive S4 gallop. Lung fields were clear. Laboratory data revealed 2+ protein, few bacteria, 50-60 wbc/hpf (white blood cell/high-power field), and 45-55 rbc/hpf (red blood cell/high-power field) in urine. A complete blood count (CBC) showed a white blood count (WBC) of 5,800. Blood urea nitrogen (BUN) was 24 and creatinine was 1.9. Chest x-ray (Figures 1 and 2) showed resolution of the nodules noted in 1978, and interstitial scarring.

On his second hospital day, he underwent cystoscopy with urethral dilatation and biopsy. Cystoscopy and biopsy were repeated on his fifth hospital day. He was discharged on his eighth hospital day. Biopsy specimens were taken from the prostatic urethra as well as from the bladder neck. These were positive for necrotic granuloma, giant cell, and vessels with vasculitis similar to his lung tissue and consistent with Wegener's granulomatosis (Figure 3). Specimens were sent to The National Institutes of Health (NIH) for confirmation. A representative slide taken from G.L. at the time of his initial, diagnostic, open-lung biopsy in 1978 is shown in Figure 3.

## Discussion

Wegener's granulomatosis is a systemic necrotizing vasculitis. Involvement of the upper respiratory tract is typical and is manifested by chronic progressive inflammation, mucosal ulcerations, chronic purulent sinusitis with or without rhinitis, nasoseptal perforation, saddle nose deformity, otitis media, and orbital extension. Lower respiratory tract involvement may include tracheobronchial erosions, pneumonitis, and cavity formation. Renal involvement is characterized by segmental necrotizing glomerulonephritis and progressive renal insufficiency. Reported, but rarely involved, are the gastrointestinal tract, heart, and peripheral nerves.<sup>1</sup>

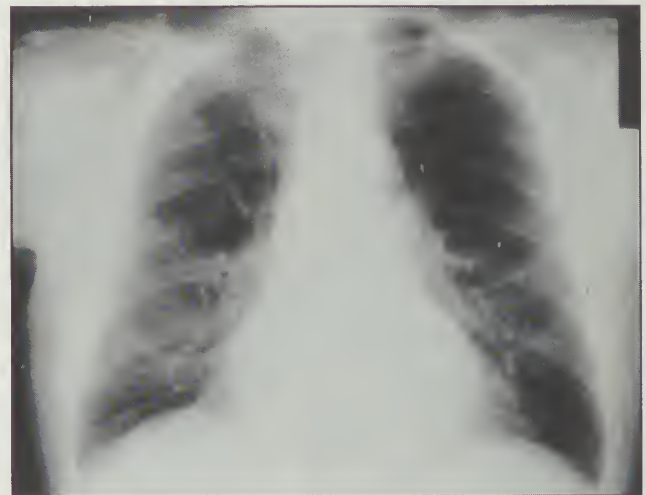
In an intensive literature search, only one case was found in which the lower urinary tract was affected. University Hospital in Rotterdam, The Netherlands, reported a case of retroperitoneal involvement of Wegener's granulomatosis with extrinsic compression of a ureter.<sup>2</sup> No cases were found intrinsic to the lower urinary tract.

At follow-up, G.L. presented to his personal physician complaining of blood-streaked sputum. He went on to suffer massive hemoptysis, congestive heart failure, and pneumonia, leading to respiratory failure. He was intubated and started on Cytosan® and steroids. This second hospitalization was also complicated by myocardial infarction. However, he did have gradual improvement and was discharged three weeks after admission.

We believe the lower urinary tract involvement in the first hospitalization signaled the reactivation of his vasculitis with pulmonary and possibly coronary involvement. We would like to alert the medical community to such unusual manifestations of Wegener's disease (i.e., urethral involvement), so that such manifestations may be treated aggressively in the hope of preventing full-blown reactivation of the disease.

## References

1. Fauci AS, Haynes BF, Katz P, Wolff SM. Wegener's granulomatosis: Prospective clinical and therapeutic experience with 85 patients for 21 years. *Ann Intern Med* 1983; 98:76-85.
2. Metselaar HJ, ten Kate FJW, Weimar W. Ureter obstruction as a complication of Wegener's granulomatosis. *Eur Urol* 1985; 11:63-4.



Figures 1 and 2. Chest x-rays showing nodule resolution and interstitial scarring.

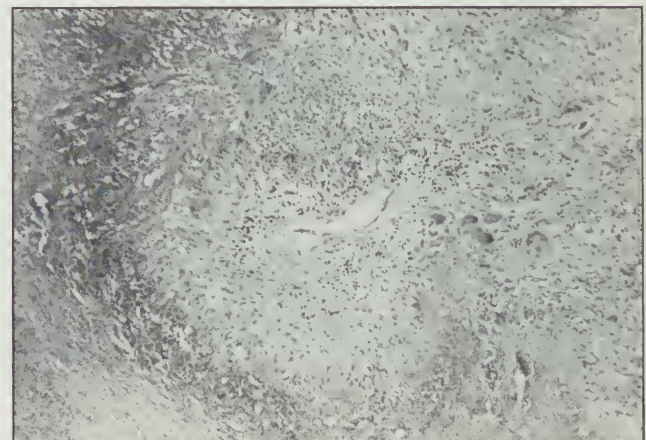


Figure 3. Representative slide from initial open-lung biopsy.

# We Build Beautiful Sunlit Home Additions



Sunspace Design  
Studio, Inc.

(301) 882-6200

MHC 16069



---

# Prognosis of Oncology Patients Receiving Intensive Care Using the APACHE II Scoring System

---

Robert Dart MD, Bhavdipkumar Patel MD, Jorge Perez-Alard MD, Surender Vaswani MD, and Sita Yanamadala MD

---

*Dr. Dart is an internist in private practice in Baltimore, MD. Drs. Patel, Perez-Alard, Vaswani and Yanamadala are house staff at Harbor Hospital Center, Baltimore, MD.*

---

*In a study at Harbor Hospital Center, the Acute Physiology and Chronic Health Evaluation (APACHE II) system greatly underestimated and was, therefore, not useful as a predictor of mortality for patients with oncological disorders.*

---

Intensive care began with the close observation of acutely ill, postoperative patients in one room of a hospital. Today, nearly every hospital with 200 or more beds has an intensive care unit (ICU), whereas in 1960 only 10 percent of such hospitals had ICUs.<sup>1</sup> This growth, however, has been an expensive one. ICU beds are three times the cost of regular hospital beds and ICU costs comprise as much as 20 percent of some hospital budgets.<sup>2</sup> Consequently, hospitals continually scrutinize the use of ICU resources to ensure that they are being used effectively.

One way to evaluate the effectiveness of ICU resources is to compare actual outcomes of treatment to predicted outcomes. Among the methods used to predict mortality among ICU patients is the Acute Physiology and Chronic Health Evaluation (APACHE II) Severity of Disease Classification System.<sup>3</sup> Various studies using APACHE II data have demonstrated a strong and stable relationship between severity of illness and subsequent probability of death from certain diseases commonly treated in the ICU.<sup>4</sup>

The following study examines whether the APACHE II system can be used to predict the mortality of patients who are admitted to the ICU with oncological disorders.

## Patients and Methods

The Harbor Hospital Center is a 376-bed community hospital serving communities surrounding the southern Baltimore area and northern Anne Arundel County in Maryland. The hospital contains sixteen ICU beds shared by surgical and medical admissions.

Data were collected on 842 consecutive medical admissions to the ICU from December 1985 through December 1987. Internal Medicine residents, during their rotations through the ICU, maintained a list of the patients admitted to the medical service either from the emergency room, the hospital floor, or the operating room, and noted whether the patients had underlying malignancies.

Within twenty-four hours of admission, medical interns recorded certain physiologic data on each patient including vital signs; results of arterial blood gas; white blood cell count;

hematocrit; serum sodium, potassium and creatinine levels; and Glasgow coma scale. Also recorded were the reason for admission, whether the patient was immunocompromised or chronically impaired, and whether certain therapeutic interventions were used during the first twenty-four hours.

The data were inserted into the APACHE II computer program, developed by the George Washington University Medical Center.<sup>3,5,6</sup> The final product of the APACHE II system is a computation of each patient's percentage risk of dying in the hospital during the admission. The system calculates this by assigning points depending on how much each of eleven physiological values deviates from the normal. Points are also assigned for advanced age and for a history of severe organ system insufficiency or immunocompromised states. Patients in this latter category include those with cirrhosis, esophageal varices, hepatic encephalopathy, Class IV heart disease, severe chronic obstructive pulmonary disease (COPD) or renal failure on dialysis, or those receiving immunosuppressive therapy. There is a direct relationship between the sum of the above points and predicted hospital mortality, derived from a multiple logistic regression equation using a factor for the particular disease category that brought the patient to the ICU.

Patients were followed through their entire hospital admission, even if transferred from the ICU to the hospital floor. Hospital mortality included those patients who died in the ICU or on the floor after transfer from the ICU, but before discharge from the hospital. Mortality data were compiled on an ongoing basis. The statistical significance of the composite data were tested using a chi-square test.

## Results

A total of 842 ICU patients, including 76 oncology and 766 non-oncology patients, were part of this study (Table 1). The total number of deaths (i.e., the observed mortality) was 303, or 36 percent. There were 250 deaths among the 766 non-oncology patients, for an observed mortality of 33 percent. There were fifty-three deaths among the seventy-six oncology patients, for an observed mortality of 70 percent. The difference in mortality rates between non-oncology and oncology patients was statistically significant.

Using APACHE II, the expected mortality for all patients in the study was 32 percent (Table 2). The percentage difference (not the absolute difference) between the observed mortality and the expected mortality was 11 percent. The expected mortality for

non-oncology patients was 31 percent, only 6 percent below the observed mortality. The expected mortality for oncology patients was 46 percent, which was 52 percent below the observed mortality. The difference between the observed and expected mortality among cancer patients was statistically significant.

We then subdivided the group of oncology patients into those with hematological malignancies and those with non-hematological malignancies (Table 3), because a previous study in another hospital found that APACHE II could not accurately predict mortality for patients with hematological malignancies.<sup>7</sup> In our study, there were thirteen deaths among the twenty-one patients with hematological malignancies -- an observed mortality of 62 percent. There were forty deaths among the fifty-five patients with non-hematological malignancies -- an observed mortality of 73 percent.

The expected mortality among patients with hematological malignancies (Table 4) was 57 percent, only 9 percent below the observed mortality. This was a surprising finding in view of the previous study. In contrast, the expected mortality among patients with non-hematological malignancies was 42 percent, or 75 percent below the observed mortality. This difference was statistically significant.

In order to determine whether there was a difference in mortality among the various types of cancer, we stratified the oncology patient group (Table 5). The only type of malignancy for which there were a sufficient number of patients was lung cancer. The observed mortality of 76 percent among lung cancer patients was 67 percent higher than the predicted mortality (Table 6).

Among all oncology patients, our specificity (i.e.,

**Table 1. Study Patients: Mortality**

	No. Patients	No. Deaths	Observed Mortality	P Value
Oncology	76	53	70%	
Non-oncology	766	250	33%	<.005
Total	842	303	36%	

**Table 2. Study Patients: Observed v Expected Mortality**

	Observed Mortality	Expected Mortality (APACHE)	Percent Difference	P Value
Oncology	70%	46%	52%	<.005
Non-oncology	33%	31%	6%	>.1
Total	36%	32%	11%	

**Table 3. Oncology Patients: Comparative Mortality**

	No. Patients	No. Deaths	Observed Mortality	P Value
Non-hematological	55	40	73%	>.1
Hematological*	21	13	62%	

\*Multiple Myeloma, Lymphoma, Leukemia

**Table 4. Oncology Patients: Observed v Expected Mortality**

	Observed Mortality	Expected Mortality (APACHE)	Percent Difference	P Value
Non-hematological	73%	42%	75%	<.005
Hematological*	62%	57%	9%	

\*Multiple Myeloma, Lymphoma, Leukemia



ability to predict correctly those who lived) was 83 percent and our sensitivity (i.e., ability to predict correctly those who died) was 48 percent (Table 7). The predictive value of a positive test was 86 percent and the predictive value of a negative test was 43 percent. We multiplied each patient's APACHE II risk of death by 1.52 to take into account the 52 percent difference between the observed and predicted mortality of the oncology patients as a group. The adjusted specificity dropped to 58 percent but the adjusted sensitivity increased to 73 percent (Table 8). The predic-

tive value of a positive test was 79 percent, and the predictive value of a negative test was 50 percent. (Riegelman's statistical format was used.<sup>8</sup>) Predictive value calculations have important clinical implications, answering the question of how good a test is at ruling in or ruling out disease.<sup>8</sup> In this case, predictive value answers the question of how good the APACHE II system is at predicting death and survival.

## Conclusions

Two of our findings were significant: The mortality rate for oncology patients entering our ICU was much higher than the mortality rate for non-oncology patients, and the mortality rate for oncology patients was higher than we could predict using the APACHE II scoring system.

Our finding that the mortality rate for oncology patients was much higher than the mortality rate for non-oncology patients is supported by previous studies showing a diagnosis of neoplasm to be a factor associated with poor prognosis. These studies have documented mortality rates up to 96 percent among certain groups of oncology patients, such as those with lymphoma and respiratory failure.<sup>7,9-11</sup>

The high mortality among cancer patients is understandable given their tendency to develop dysfunction of increasing numbers of critical organ systems.<sup>12</sup> Among the more common problems are acute respiratory insufficiency, electrolyte imbalance, sepsis, renal failure, cardiac arrhythmias, congestive heart failure, shock, liver failure, coagulopathies, and gastrointestinal (GI) bleeding.<sup>11</sup> Renal failure alone has been shown to be associated with a 90 percent mortality rate,<sup>13</sup> and prognosis worsens as the number of organ systems that fail increases.<sup>14</sup> Chemotherapy and radiation therapy predispose cancer patients to various hematologic abnormalities, including anemia which compromises oxygen delivery, leukopenia which is associated with sepsis, thrombocytopenia which can lead to GI bleeding, and disseminated intravascular coagulopathy.<sup>12,14</sup>

In part, this explains why the mortality rate for our oncology patients was even higher than we could predict using the APACHE II scoring system. Although prognosis worsens as the number of failing organ systems increase,<sup>15</sup> the APACHE II system adds five chronic health points regardless of whether one organ system -- or four -- are compromised.

Another explanation for APACHE II's underestimation of mortality among our oncology patients is that many patients were admitted to the ICU for reasons other than their underlying malignancy. With one exception (respiratory failure from neoplasm), there are no specific disease categories in the APACHE II system that apply directly to oncology patients.

APACHE II was designed, in part, to plan for regional ICU needs, to make outcome comparisons, to evaluate new technology, and to determine who

**Table 5. Oncology Patients: Mortality By Cancer Type**

	No. Patients	No. Deaths	Observed Mortality
Lung	29	22	76%
Breast	6	5	83%
Colorectal	4	1	25%
Other GI	6	6	100%
Urogenital	7	4	57%
Lymphoma	6	4	67%
Leukemia	10	6	60%
Mult. Myeloma	5	3	60%
Other*	3	2	67%

\*Astrocytoma, Thymoma, Oral

**Table 6. Oncology Patients: Observed v Expected Mortality By Cancer Type**

	Observed Mortality	Expected Mortality (APACHE)	Percent Difference	P Value
Lung	76%	45%	67%	<.005
Breast	83%	34%	146%	-
Colorectal	25%	18%	37%	-
Other GI	100%	44%	130%	-
Urogenital	57%	40%	43%	-
Lymphoma	67%	38%	74%	-
Leukemia	60%	60%	0	-
Mult. Myeloma	60%	74%	(19%)	-
Other*	67%	52%	29%	-

\* Astrocytoma, Thymoma, Oral

**Table 7. Outcome Based on APACHE II**

	Predicted To Live	Predicted To Die	Total
Actual Alive	20	4	25
Actual Dead	27	25	52
Total	47	29	76

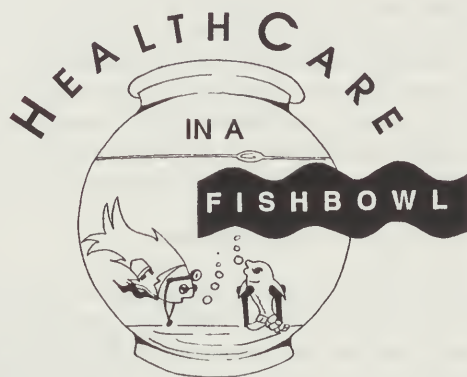
Sensitivity=48%      Specificity=83%  
 Predictive Value of Positive Test=86%  
 Predictive Value of Negative Test=43%

**Table 8. Outcome Based on Adjusted APACHE II**

	Predicted To Live	Predicted To Die	Total
Actual Alive	14	10	24
Actual Dead	14	38	52
Total	28	48	76

Sensitivity=73%      Specificity=58%  
 Predictive Value of Positive Test=79%  
 Predictive Value of Negative Test=50%

Through glass and water,  
the view is distorted.



Let's try to clear it up!

## 1991 Leadership Conference

of the  
Pennsylvania Medical Society  
April 16-17

The New Hilton Hotel and Towers  
Market Square, Harrisburg

Charles R. Nesson, Harvard University professor of law and moderator of the critically acclaimed PBS series, "The Constitution, A Delicate Balance," will moderate a panel of experts in the medical and legal systems, including:

- **E. Paul Kirk, MD**, member of the Oregon Health Services Commission since 1989 and Chairman of Obstetrics/Gynecology at the University of Oregon Health Sciences Center
- **Maurice Hartman**, Region Three Administrator, Health Care Financing Administration, U.S. Department of Health and Human Services
- **Jeffrey R. Lewis**, Republican Staff Director, U.S. Senate Special Committee on Aging
- And others representing physicians, the trial and defense bars, hospital administration, patients' rights, and the state legislature

AMA Executive Vice President James S. Todd, MD, will give the keynote address. Ross N. Rubin, JD, AMA's Director of Legislative Activities, will report on the Washington scene.

Workshops focus on leadership skills, stress management, and quality assurance. Registration is only \$60 for the entire program!

**JOIN US IN PENNSYLVANIA!**

Call (717) 558-7750 for more information.

benefits from various therapies. Recently, for example, APACHE II was used to determine which patients would benefit from total parenteral nutrition (TPN).<sup>14</sup> APACHE II can also be used to make triage decisions during times of high demand for ICU beds. We believe that the APACHE II greatly underestimates the severity of illness among oncology patients and, therefore, should be adjusted so that such decisions can be based on accurate data. Since multi-system failure is one way in which oncology patients often differ from non-oncology patients, the APACHE II system should be modified so that the APACHE II score and attendant risk of death increase as the number of organ systems that fail increase. In fact, a new revised APACHE III will be available soon.

In the short run, we recommend multiplying the risk of death for oncology patients by a factor that reflects the difference between the observed and predicted mortality in these patients. However, such a factor should only be applied to a group of patients, as sensitivity and specificity are still unacceptable when the factor is applied to individual patients.

### References

1. Campion EW, Mulley AG, Goldstein RL, Barnett GO, Thibault GE. Medical intensive care for the elderly: A study of current use, costs, and outcomes. *JAMA* 1981; 246:2052-56.
2. Thibault GE, Mulley AG, Barnett OB, Goldstein RL, Reder VA, Sherman EL, Skinner ER. Medical intensive care: Indications, interventions, and outcomes. *N Engl J Med* 1980; 302:938-42.
3. Knaus WA, Zimmerman JE, Wagner DP, Draper EA, Lawrence DE. APACHE--acute physiology and chronic health evaluation: A physiologically based classification system. *Crit Care Med* 1981; 9:591-7.
4. Knaus WA, Draper EA, Wagner DP, Zimmerman JE. An evaluation of outcome from intensive care in major medical centers. *Ann Intern Med* 1986; 104:410-18.
5. Knaus WA, Draper EA, Wagner DP, Zimmerman JE. APACHE II: A severity of disease classification system. *Crit Care Med* 1985; 13:818-29.
6. Wagner DP, Knaus WA, Draper EA. Physiologic abnormalities and outcome from acute disease. *Arch Intern Med* 1986; 146:1389-96.
7. Lloyd-Thomas R, Wright I, Lister TA, Hinds CJ. Prognosis of patients receiving intensive care for life-threatening medical complications of haematological malignancy. *Br Med J* 1988; 296:1025-29.
8. Riegelman RK. *Studying a Study and Testing a Test*. Boston: Little, Brown and Co., 1981.
9. Hauser MJ, Tabak J, Baier H. Survival of patients with cancer in a medical critical care unit. *Arch Intern Med* 1982; 142:527-9.
10. Johnson MH, Gordon PW, Fitzgerald FT. Stratification of prognosis in granulocytopenic patients with hematological malignancies using the APACHE II severity of illness score. *Crit Care Med* 1986; 14:693-7.
11. Turnbull A, Goldiner P, Silverman D, Howland W. The role of an intensive care unit in a cancer center. *Cancer* 1976; 37:82-4.
12. Snow RM, Miller WC, Rice DL, Khalil A. Respiratory failure in cancer patients. *JAMA* 1979; 241:2039-42.
13. Cullen DJ, Ferrara LC, Briggs BA, Walker PF, Gilbert J. Survival, hospitalization charges and follow-up results in critically ill patients. *N Engl J Med* 1976; 294:982-7.
14. Schuster DP, Harion JM. Precedents for meaningful recovery during treatment in a medical intensive care unit. *Am J Med* 1983; 75:402-8.
15. Hopefl AW, Taaffe CL, Herrmann VM. Failure of APACHE II alone as a predictor of mortality in patients receiving total parenteral nutrition. *Crit Care Med* 1989; 17:414-7.



# AIM HIGH



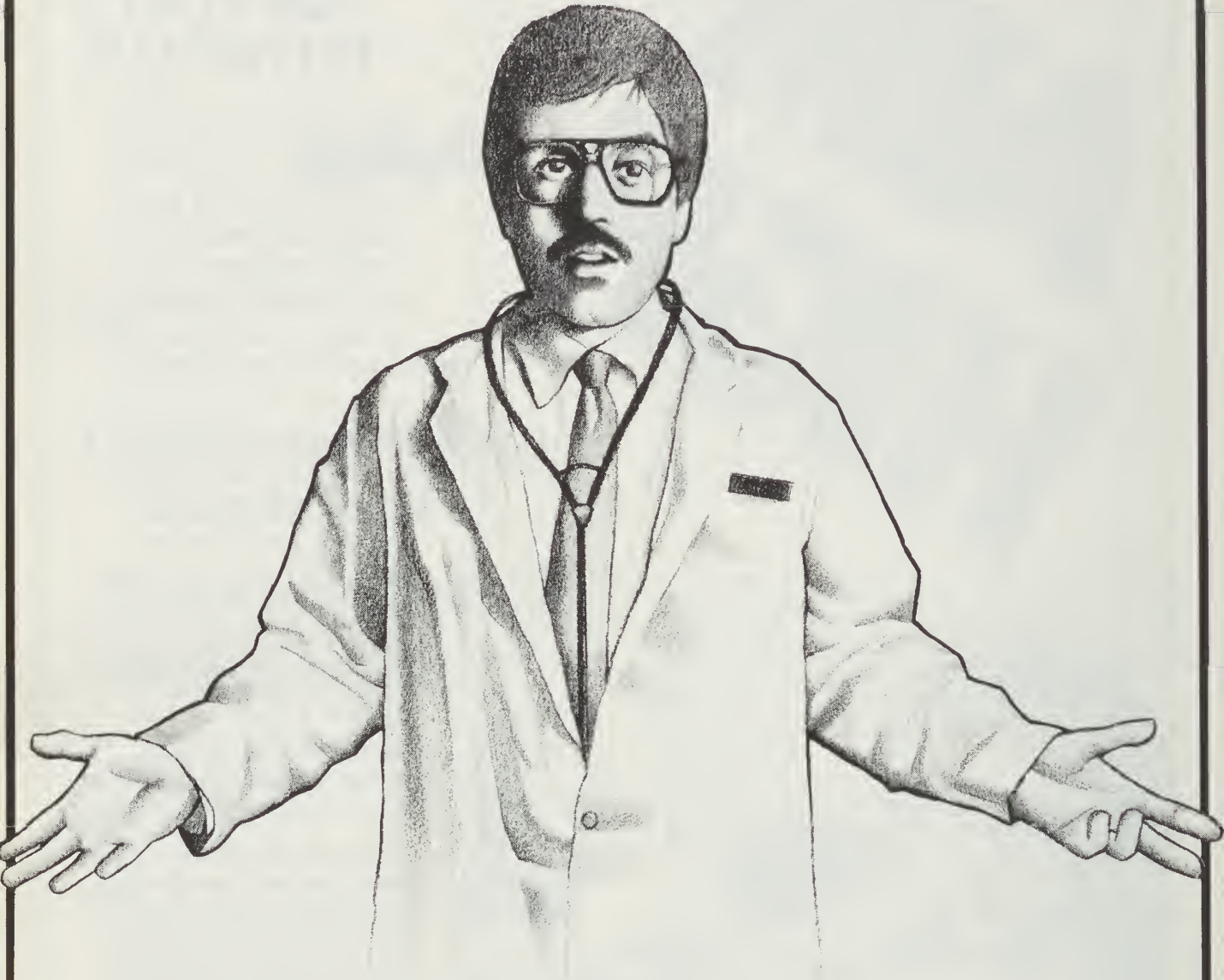
## BE AN AIR FORCE PHYSICIAN.

Become the dedicated physician you want to be while serving your country in today's Air Force. Discover the tremendous benefits of Air Force medicine. Talk to an Air Force medical program manager about the quality lifestyle, quality benefits and 30 days of vacation with pay per year that are part of a medical career with the Air Force. And enjoy the satisfaction of a general practice without the financial and management burden. Today's Air Force offers an exciting medical environment and a non-contributing retirement plan for physicians who qualify. Learn more about becoming an Air Force physician. Call

**USAF HEALTH  
PROFESSIONS  
COLLECT  
(301)981-7897**



# HOW ABOUT IT?



Is it fair that only some Maryland physicians support the political activity  
that benefits all physicians?

**JOIN THE CAUSE!    GET INVOLVED!    GET POLITICAL!**

Join Maryland Medical Political Action Committee

Send your \$100 check to:

Harold Bob, M.D.

Chairman MMPAC

1211 Cathedral Street,

Baltimore, MD 21201

Contributions to AMPAC and State PAC are not deductible as charitable contributions for Federal income tax purposes.



---

# Myocardial Infarction in Pulmonary Edema

---

Syed M. A. Riaz MD and Martha Selonick MD

---

*Dr. Riaz is a member of the house staff and Dr. Selonick is an attending physician in the Division of Cardiology at Harbor Hospital Center, Baltimore, MD.*

**P**ulmonary edema is a common condition encountered in Harbor Hospital Center. Patients presenting with this condition are customarily admitted to either the intensive care unit (ICU) or to a monitored floor. However, there has been some debate as to whether such patients can safely be placed on the general medical floor (GMF) once they are stabilized in the emergency room (ER). Equally controversial has been the length of time patients with pulmonary edema need to stay in the ICU. This issue revolves around the incidence of myocardial infarction (MI) in patients with pulmonary edema. Patients whose congestion is precipitated by MI would require more scrupulous care.

We have reviewed the literature on the incidence of MI in pulmonary edema. Four studies were found which showed that the incidence ranges between 29 percent and 45 percent.<sup>1-4</sup> We undertook the following prospective, uncontrolled study to determine the relationship between the frequency of MI and the factors influencing its occurrence in patients presenting with pulmonary edema.

## Methods

A total of forty-four consecutive patients who met the criteria for pulmonary edema were admitted to the ICU between October 1, 1989 and March 15, 1990. These patients had clinical evidence of pulmonary edema which was confirmed by physical examination and chest x-ray. From the patients' medical records we extracted information regarding their age, sex, presenting complaints, past history of congestive heart failure (CHF), past history of pulmonary edema, and past history of MI. The patients were followed throughout their hospital course for elevations of creatine phosphokinase (CPK)-MB isoenzymes and for electrocardiogram (EKG) changes to establish a diagnosis of MI. Patients were also followed for in-hospital survival. Results were analyzed by the chi-square method.

## Results

The overall incidence of MI among the study patients was 48

---

*A prospective study of forty-four consecutive patients admitted to the ICU/CCU with pulmonary edema found a 48 percent overall incidence of myocardial infarction.*

---

percent. The average age of the patients was 68.9 years. We divided the patients into two groups: Those over seventy years of age and those seventy years of age or younger. Fifty-three percent of the patients were over seventy years of age and 47 percent were seventy years of age or below. The incidence of MI among those patients over seventy years of age was 76 percent compared to 24 percent in the younger group.

Of the forty-four patients in the study, 43 percent were male and 57 percent were female. Sixty-eight percent of the males who presented with pulmonary edema were subsequently found to have had an MI.

Dyspnea was the chief complaint in 96 percent of the study patients and the chief complaint of every patient who subsequently was found to have had an MI. Chest pain and dyspnea were the chief complaints in the remaining 4 percent, none of whom were found to have had an MI.

Fifty-three percent of the patients had a history of pulmonary edema and/or MI. Of these, 57 percent suffered a new MI. Forty-one percent of the patients had a history of CHF, and 43 percent were found to have had an MI.

The total mortality during hospitalization was 14 percent. The mortality among patients who were found to have had an MI was 24 percent. The mortality in males was higher than in females (67 percent v 33 percent). Five of the six patients (83 percent) that died had an MI.

## Discussion

Our study differs from other studies in that we concentrated on the incidence of MI and the factors influencing the occurrence of MI in pulmonary edema. Other studies looked into the prognostic factors,<sup>1</sup> cir-

cadian variation in the frequency of MI,<sup>2</sup> and death in pulmonary edema.<sup>3</sup>

The incidence of MI in 48 percent of our study patients was similar to the study by Plotnick et al.<sup>2</sup> In contrast, a study by Goldberg et al<sup>1</sup> showed an incidence of 29 percent, while a study by Barash et al<sup>4</sup> found an incidence of 36 percent.

The 24 percent mortality among our study patients was higher than the 16 percent mortality in studies by Goldberg et al<sup>1</sup> and Plotnick et al.<sup>2</sup> Our finding that the mortality among male patients was higher than female patients (67 percent v 33 percent) contrasted with the finding by Goldberg et al that the mortality was the same in both sexes.<sup>1</sup>

Three of our findings were statistically significant: (1) MI occurred more frequently in pulmonary edema patients over seventy years of age; (2) MI occurred more frequently in male patients with pulmonary edema; and (3) MI occurred more frequently among pulmonary edema patients with a past medical history of pulmonary edema or MI. Although these findings identify subgroups of pulmonary edema patients who are at high risk, the overall high incidence of MI in our study patients underscores the critical condition of all patients who present with pulmonary edema. They are patients who require and deserve scrupulous care and close monitoring in an intensive care unit, regardless of how quickly they become clinically stabilized.

## References

1. Goldberg JJ et al. Prognostic factors in acute pulmonary edema. *Arch Intern Med* 1986; 146:489-93.
2. Plotnick GD et al. Acute cardiogenic pulmonary edema in the elderly: Factors predicting in-hospital and one-year mortality. *South Med J*. 1982; 75:565-9.
3. Buff DD et al. Acute pulmonary edema and myocardial infarction (letter to the editor). *Ann Intern Med* 1988; 108:247.
4. Barash, D. *J Emerg Med* 1989; 7:119-21.

## ATTENTION PRIMARY CARE PHYSICIANS

...announcing one meeting you CANNOT AFFORD TO MISS

### THE ULTIMATE COURSE IN PROCEDURAL SKILLS for PRIMARY CARE PHYSICIANS (now in its third year of monthly presentations)

LEARN: ENT procedures, Flexible Sigmoidoscopy, Pulmonary Function testing, Allergy testing, Cardiac Stress testing, the use of the Holter Monitor, Ambulatory Blood Pressure testing, Peripheral Vascular Flow testing, Dermatologic Surgical techniques, Colposcopy, plus information on CPT coding, & more...

1991

#### LOCATIONS AND DATES:

• FT. LAUD. Feb. 16-17  
• SAN FRANCISCO Mar. 23-24  
• NYC April 20-21

• WASHINGTON DC May 4-5  
• NASHVILLE June 8-9  
• CHICAGO July 13-14

• ST. LOUIS Sept. 14-15  
• ATLANTA Oct. 12-13  
• DISNEY WORLD Nov. 16-17  
• NEW ORLEANS Dec. 14-15

## CURRENT CONCEPT SEMINARS, Inc

5700 Stirling Rd. • Hollywood, FL 33021 • (305) 966-1009 • (800) 969-1009

America's Largest Independent Producer of Professional Education Programs  
Write or call for information on our WEEKLY video VACATION SEMINARS

## □ Maryland Advertisers □

To advertise in *MMJ* call:  
Network Publications  
301-235-0500

Physicians'  
Quality Assurance  
Board Actions  
appear regularly in *MMJ*

We invite your comments  
as well as scientific articles.

Write:

*Letters to the Editor*  
*MMJ*, 1211 Cathedral St.  
Baltimore, MD 21201



---

# Peripartum Cardiomyopathy: A Case Study

---

Eli B. Alegado MD and Joseph T. Mardelli MD

---

*Dr. Alegado is a member of the house staff and Dr. Mardelli is an attending physician in the Division of Cardiology at Harbor Hospital Center, Baltimore, MD.*

---

*Although the diagnosis of peripartum/postpartum cardiomyopathy is uncommon, immunosuppressive therapy appears to be a safe and effective treatment.*

---

**P**eripartum cardiomyopathy is a primary myocardial disease that develops during pregnancy or in the first five months after pregnancy. The presenting signs and symptoms are those of congestive heart failure (CHF) and more specifically, left ventricular failure. Evidence of cardiomegaly is almost always present when clinical and radiologic findings are analyzed. On endomyocardial biopsy, histological features indistinguishable from other forms of dilated cardiomyopathy include muscle fiber degeneration, interstitial edema, focal areas of fibrosis, and scattered interstitial and perivascular infiltration by mononuclear inflammatory cells.<sup>1-2</sup>

Three elements are necessary to establish the diagnosis: (1) occurrence during the last gestation and the first few months postpartum; (2) no previous history of heart disease; and (3) exclusion of known causes of cardiomyopathy (i.e., viral infections, nutritional deficiencies, small coronary vessel abnormalities, hormonal changes, and immunologic responses to fetal and myometrial antigens).<sup>3,4</sup> Patients with twin pregnancy seem to be more at risk of developing peripartum and postpartum cardiomyopathy (7 to 10 percent of the published cases).<sup>3</sup>

## Case Presentation

A twenty-seven-year-old female (gravida I, para 0, abortion 0), thirty-seven week gestational age with twin pregnancy, presented at Harbor Hospital Center with shortness of breath, orthopnea, and ankle-swelling of two-week duration.

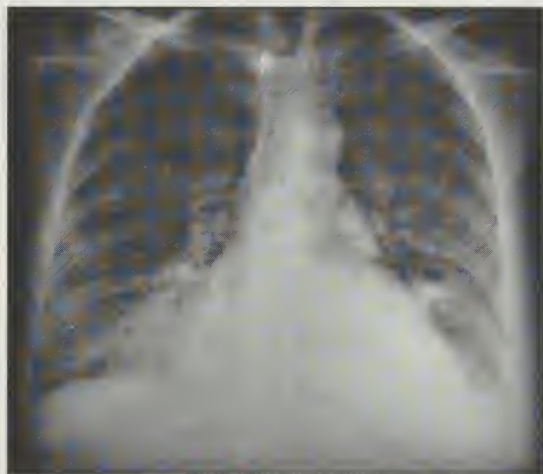
She was taken to the delivery room where the first baby was vaginally delivered. A cesarean section was performed for the second baby because of breech presentation. Postnatally, she continued to have shortness of breath, paroxysmal nocturnal dyspnea, and increasing ankle-swelling. She was then noted to have moderate hypertension and proteinuria. There was no history of any serious illnesses since childhood. She did not drink or smoke, and was not taking any medications. Her family history was positive for hypertension.

She was a well-developed, well-nourished young woman, in acute respiratory distress. Vital signs were: blood pressure 144/112 mm Hg, pulse rate 104, and respiratory rate 30. She had a raised jugular

venous pressure to 10 cm, an enlarged heart, summation gallop, and a murmur of mitral regurgitation. Chest examination showed bilateral crackles and wheezing. There was bilateral 2+ ankle-edema.

Routine laboratory results showed normochromic, normocytic anemia with an hematocrit of 21.4. Total protein was 3.9, albumin was 2.3, alkaline phosphate was 238, and lactate dehydrogenase (LDH) was 457. Chest x-ray (Figure 1) showed cardiomegaly and pulmonary edema. Electrocardiogram showed sinus tachycardia and nonspecific T-wave abnormalities. Echocardiogram confirmed cardiac dilatation and poor ventricular function, and a large amount of pleural effusion.

The patient was transfused with two units of packed red blood cells (PRBC) to correct the anemia but developed worsening CHF. She was treated with oxygenation, fluid restriction, diuretics, digoxin, and was placed on an angiotensin converting enzyme (ACE) inhibitor. Over the next few days, the patient's course was marked by clinical improvement. She was then transferred to Johns Hopkins Hospital for endomyocardial biopsy. Biopsy samples were taken from multiple sites in the right ventricle on July 22, 1988. Histologic examination of cardiac tissues (Figure 2) showed perivascular and interstitial mononuclear cell infiltrates with occasional eosinophil and myocyte necrosis consistent with myocarditis. A multiple-gated-image acquisition analysis (MUGA) showed moderate to marked left ventricular dysfunction at rest with moderate dilatation. The patient was immediately begun on prednisone, 40 mg daily, and azathioprine, 75 mg daily, for four months. A repeat endomyocardial biopsy performed on September 15, 1988 showed almost complete disappearance of inflammatory infiltration. MUGA showed normal global biventricular function. There was biventricular dilatation and relative hypokinesia in the left ventricle, representing changes secondary to cardiomyopathy. The patient is currently maintained on prednisone and azathioprine to prevent heart failure, and is being followed up as an outpatient.



**Figure 1.** Chest x-ray shows cardiomegaly and pulmonary edema.

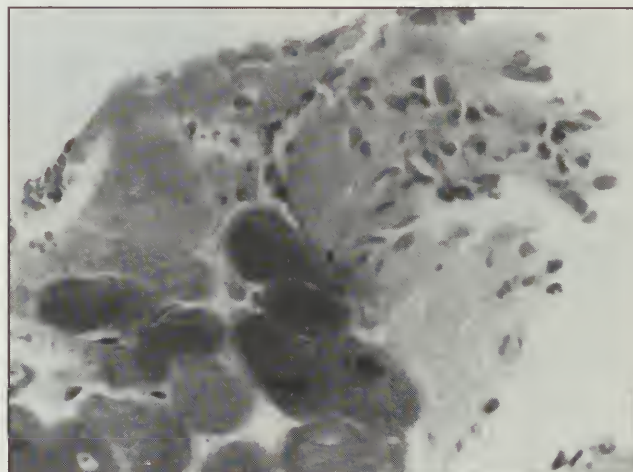
## Discussion

Although the diagnosis of peripartum/postpartum cardiomyopathy is not new, it remains uncommon, representing less than 1 percent of cardiovascular problems associated with pregnancy.<sup>5</sup> Clinical findings and endomyocardial biopsy suggested that myocarditis was the cause of the symptoms in this patient. Immunosuppressive treatment with prednisone and azathioprine led to dramatic clinical improvements. However, her echocardiogram showed some decreased ventricular contractility at three to four months follow-up. The patient was treated with prednisone for an additional few months. After a two-year follow-up period, there were no cardiac symptoms and the patient remains in excellent clinical condition. She was advised against future pregnancy. Medei et al<sup>4</sup> noted that immunosuppressive therapy appears to be a safe and effective treatment when peripartum myocarditis and cardiomyopathy are present.

Even though this patient had hypertension at one time, it is difficult to incriminate hypertension as a causative factor since it is absent in more than 25 percent of reported cases surveyed, and is poorly documented in some reports.<sup>6</sup>

## References

1. Cole P, Cook F, Plappert T, Saltzman D, St. John Sutton M. Longitudinal change in left ventricular architecture and function in peripartum cardiomyopathy. *Am J Cardiol* 1987; 60(10):871-6.
2. Marin-Huerta E, Erice A, Fernandez-Espino R, Navascues I, Martin-de Dois R. Postpartum cardiomyopathy and acute myocarditis. *Am Heart J* 1985; 110(5):1079-81.
3. Veille JC. Peripartum cardiomyopathies: A review. *Am J Obstet Gynecol* 1984; 6:805-15.
4. Medei MG, DeMent SH, Feldman AM, Hutchins GM, Baughman KL. Peripartum myocarditis and cardiomyopathy. *Circulation* 1990; 81(3):922-8.
5. Carvalho A, Brandao A, Martinez EE, Alexopoulos D, Lima VC, Andrade JL, Ambrose JA. Prognosis in peripartum cardiomyopathy. *Am J Cardiol* 1989; 64(8):540-2.
6. Lee W, Cotton DB. Peripartum cardiomyopathy: Current concepts and clinical management. *Clin Obstet Gynecol* 1989; 32(1):54-67.



**Figure 2.** Perivascular and interstitial mononuclear cell - myocyte necrosis consistent with myocarditis.



# WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, P.I.E. Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality.

P.I.E. Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

**Physician Managing Boards**, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

#### **Quality Rated Insurance**

**Program:** a modified claims-made plan which works in the physician's favor to reward loss-free physicians

and provides added protection not available in other policies.

**A Financially Sound Reinsurance Program** with Lloyd's of London, the world's most prestigious reinsurer.

**An Aggressive Defense Team**, experienced in all types of medical liability claims and willing to fight for your cause.

If your standards match ours, let's talk business.

---

THE P•I•E MUTUAL

---

INSURANCE COMPANY

---

North Point Tower • 1001 Lakeside Ave. • Suite 1800  
Cleveland, OH 44114-1149 • (216) 736-8400 • (800) 228-2335

---

#### **Winterich • Neff & Associates**

7 East Redwood • Suite 810  
Baltimore, Maryland 21202  
(301) 234-2800

# SO WE CAN HOLD THE PREMIUMS DOWN.



### ANNAPOLIS WATERFRONT

3 Bdrm., 3.5 Bath, with family room townhome. Fantastic view (shown), many custom features and deep water boat slip on Back Creek (No bridges to the Bay!). Asking \$297,000. Willing to consider creative offers like holding second mortgage or exchanges/trades. Will offer further discounts in price for straight purchase. Brokers protected. Home (301) 267-6935, Office (301) 294-8803.

### Special Features

- 3 Decks (Exterior)
- Limited Access Community Security Gate
- Deep Water Slip
- No Dock, Water or Electric Fees on Boat Slip
- Dinghy Dock Use
- Guest Dock Use
- Community Bubbler Allows Winter Dock Use
- Skylights
- Wet Bar Alcove
- Stained Interior Trim
- Corner Fireplace
- Whirlpool Tub
- Wired for Security
- Ceiling Fans
- Some Custom Solar Shades

## Medical Newsletter On HOW TO PASS BOARD OF INTERNAL MEDICINE

To Be Mailed From March To August 1991  
For a FREE Sample Copy  
Mail Your Address Card To:  
Medical Newsletter  
5 Cullen Drive, West Orange N.J. 07052.

"THE BEST CARE ANYWHERE"

## Advanced-Care AMBULANCE



# 665-0550

RADIO DISPATCHED  
CLEAN MODERN VEHICLES

24 HOURS A DAY - 7 DAYS A WEEK

FULLY LICENSED EMERGENCY MEDICAL TECHNICIANS

LOCAL AND LONG DISTANCE TRANSPORTS

WE BILL MAJOR INSURANCE COMPANIES

MEDICARE AND MEDICAID APPROVED

LOCATED IN THE  
MITCHERLING BUILDING • 9413 HARFORD RD.

# YOCON® YOHIMBINE HCl

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubiaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

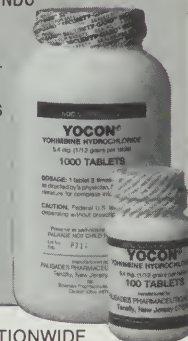
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

### References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE AT PHARMACIES NATIONWIDE

**PALISADES  
PHARMACEUTICALS, INC.**

219 County Road  
Tenafly, New Jersey 07670  
(201) 569-8502  
1-800-237-9083



---

# Rupture of the Spleen in Non-Hodgkin's Lymphoma: A Case Study

---

Carlos A. Conrado MD

---

*Dr. Conrado is a member of the house staff at Harbor Hospital Center, Baltimore, MD.*

**S**plenomegaly is common in lymphoma. However, it is unusual, if not rare, for this condition to progress to pathologic rupture of the spleen. We report on a patient who earlier experienced a life-threatening splenic rupture, secondary to his underlying non-Hodgkin's lymphoma.

---

*Prompt recognition and emergency surgery of pathological rupture of the spleen are necessary in patients with non-Hodgkin's lymphoma.*

---

## Case Presentation

A seventy-two-year-old male with a past medical history of chronic atrial fibrillation, chronic obstructive pulmonary disease, and gout was seen in the emergency room (ER) in August 1985, complaining of sharp abdominal pain of one day's duration. He had been referred by his private physician for evaluation of a possible intestinal obstruction.

The patient had been experiencing intermittent abdominal pain for two months prior to admission. On the night before admission, he developed a constant, sharp mid-abdominal pain. He presented to the ER in stable condition with a tender, distended abdomen, no bowel sounds, a white blood count of 15,000, and an abdominal x-ray showing probable splenic enlargement.

He was admitted for observation and started on intravenous fluids and antibiotics. His symptoms progressively worsened during the night, and he was scheduled for an emergency laparotomy the following morning. During the surgical procedure, the patient was found to have a ruptured spleen with nodular infiltrations. Examination of the biopsied specimen revealed an enlarged spleen weighing 1,950 grams (normal: 100-225 grams) with massive infiltration by follicular lymphoma, small cleaved cell type (nodular, poorly-differentiated lymphocytic lymphoma). The liver had several nodules as well.

A splenectomy was performed. Post-surgically, the patient's clinical course was complicated by anemia, mild congestive heart failure (CHF), transient mental-status changes, and an erythematous, pustular skin lesion thought to be viral in nature. During the remainder of the patient's stay in the hospital, his clinical status improved and he was discharged. He was to be followed up by the oncology service. In order to recapitulate the



## Bright Oaks Courtyard

2021 EMMORTON ROAD (RTE. 924) • BEL AIR, MD 21014

**20,000 Square Ft. Professional Office Buildings**

- Easy Access to I-95 & Rt. 24
- Close Proximity to residential & commercial developments
- Customized suites
- HVAC gas, elevators, ample parking
- Competitive rates
- Tenant allowances

**Contact: C.H. Goldberg, MT-(ASCP); CIBN**  
**(301) 893-1800**  
**1-800-767-7070**

Developed by:



ROBERT WARD REALTY INC.

### Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of *Maryland Medical Journal*.

Fill out the form below and mail it to:

Wanda Griebel  
**MMJ** 1211 Cathedral Street  
 Baltimore, MD 21201

#### Old Address

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/Town: \_\_\_\_\_  
 State: \_\_\_\_\_ Zip: \_\_\_\_\_

#### New Address

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/Town: \_\_\_\_\_  
 State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Telephone: \_\_\_\_\_ **Date Effective:** \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

medical history known to us prior to his presentation with splenic rupture and to understand the progression of his disease to this condition, it is appropriate to recount the diagnostic findings from previous medical procedures beginning in 1985.

On March 2, 1985, biopsies of two enlarged neck lymph nodes were obtained -- one from each side. The right node showed reactive hyperplasia and the left node revealed mild follicular hyperplasia. On July 7,

1987, a computed tomography (CT) scan of the abdomen and pelvis showed periaortic and pericaval lymphadenopathy. The spleen was not enlarged.

On May 9, 1988, an excisional biopsy of the lymph node on the left side of the neck revealed reactive hyperplasia with a population of mature monotonous lymphoid elements. On May 16, 1988, a CT scan of the chest revealed adenopathy in the middle mediastinum and slight adenopathy in the superior mediastinum. A CT scan of the abdomen revealed multiple areas of adenopathy in the periaortic and pericaval regions extending toward the mesentery. Again, the spleen was not enlarged. Post-splenectomy, a CT scan of the thorax, abdomen, and pelvis revealed progression of the lymphadenopathy. A bone marrow aspirate showed scattered lymphoid elements and plasma cells. The biopsy revealed paratrabeular, hypercellular forms with artifacts highly suspicious for lymphoma.

### Discussion

Lymphoma is a malignancy of lymphoid tissue characterized by the proliferation or accumulation of cells native to lymphoid tissue. A distinction is made between Hodgkin's disease and non-Hodgkin's lymphoma (NHL). Although both have their origin in lymphoid tissue, Hodgkin's disease has the distinctive morphologic features of the Reed-Sternberg giant cell.

NHL usually arises in lymph nodes (60 percent of cases), as well as in the lymphoid tissue of parenchymal organs (40 percent). All variants have the potential for spread to other lymph nodes and into various tissues throughout the body. During the course of the disease, the cervical lymph nodes are the initial site of involvement in about 40 percent of cases. As the disease advances, there is involvement of the liver, spleen, and other viscera.

Splenic enlargement is a common finding in leukemia and lymphoma, but pathologic rupture is an unusual event. Only a few cases have been reported to date.<sup>1-3</sup> It was Knoblich in 1966 who first described the phenomenon in lymphoma.<sup>4</sup> Three mechanisms are believed to be responsible for spontaneous rupture: 1) defects in blood coagulability; 2) capsular distention by infiltration of the malignant process; and 3) infarction.<sup>5,6</sup> Prompt recognition and emergency surgery are necessary for patient survival.

### References

1. Andrews DF, Graston W, Hernandez R, Williams DM. Pathologic rupture of the spleen in non-Hodgkin's lymphoma. *Arch Intern Med* 1980; 140:119-20.
2. DeLoach ED, Shealy FG, Dealancy H. Spontaneous rupture of the spleen in lymphoma. *Arch Surg* 1978; 113:1014-15.
3. Davis-Christopher. *Textbook of Surgery*. (Twelfth Edition) Philadelphia: W.B. Saunders Co. 1981; 1311-27.
4. Knoblich R. Pathologic rupture of the spleen in leukemia and lymphoma. *Mich Med* 1966; 65:105-10.
5. Robbins SL et al. *Pathologic Basis of Disease*. Philadelphia: W.B. Saunders Co. 1981; 338-45.
6. Thompson WHF. Diffuse lymphocytic lymphoma with splenic rupture. *Post Grad Med J* 1969; 15:50-1.



# Commitment and Service Since 1975

The *Med Chi Agency* was established by the Medical and Chirurgical Faculty in 1975 and now has over 5,000 physicians and employees as clients.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial products. You will benefit from the many coverages available for both your professional and personal needs. You will also benefit indirectly, because Med Chi owns the *Med Chi Agency* and the earnings from its operations.

For complete information about any insurance product or service, just give us a call. We can provide the answers you seek and the solutions you need.



## **THE MED CHI AGENCY**

1204 Maryland Avenue  
Baltimore, MD 21201  
301-539-6642 Toll Free-1-800-543-1262  
FAX-1-301-752-5421



## Medical and Chirurgical Faculty of Maryland

### American Medicine Today: Perspectives from Maryland

Wednesday, May 8 - Friday, May 10, 1991  
at the University of Maryland,  
University College Center of Adult Education,  
College Park, Maryland

#### Featuring:

**Nationally Recognized Speakers and Guest Panelists**

**Legislative Affairs and Specialty Society Meetings**

**15 Hours of AMA Category 1 CME Credits**

***The Capital Steps* and Presidential Banquet**

**Child care offered based upon request**

**Over 100 Exhibitors**

**Complimentary box lunches and refreshments**

---

193rd Annual Meeting - *American Medicine Today: Perspectives from Maryland*, May 8-10, 1991

#### Evening Entertainment Registration

- |   |         |          |
|---|---------|----------|
| <input type="checkbox"/> <i>Capital Steps</i> and Presidential Banquet (price/person) | \$75.00 | \$ _____ |
| <input type="checkbox"/> <i>Capital Steps</i> only, Wednesday, May 8 (price/person)   | \$50.00 | \$ _____ |
| <input type="checkbox"/> Presidential Banquet only, Friday, May 10 (price/person)     | \$50.00 | \$ _____ |

#### Meeting Registration

- |  |                      |           |
|--|----------------------|-----------|
| <input type="checkbox"/> Member of Med Chi   |                      | No Charge |
| <input type="checkbox"/> Non Med Chi Member (check category that applies)  |                      |           |
| <input type="checkbox"/> Registering for entire meeting  | \$225.00             | \$ _____  |
| <input type="checkbox"/> Limited credit hours (\$25.00/credit hour)  | \$25 X \$ _____ hrs. |           |
| <input type="checkbox"/> Residents and Students  | \$30.00              | \$ _____  |
| <input type="checkbox"/> Apply this fee to my first year's dues.   |                      |           |
| <input type="checkbox"/> I would like accommodation information. (Accommodations available at the Center of Adult Education) |                      |           |
| <input type="checkbox"/> I would like child care on _____ (day[s]) for _____ (# child[ren]), ages _____.                     |                      |           |

TOTAL . . . . . \$ \_\_\_\_\_

FORM OF PAYMENT:    ☐ check payable to Med Chi    ☐ Visa    ☐ Mastercard

Card # \_\_\_\_\_ Signature \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Component Society: \_\_\_\_\_

To guarantee your reservations, please return this registration form by April 15, 1991 to:  
Convention Department, 1211 Cathedral Street, Baltimore, MD 21201-5585



# PRELIMINARY SCHEDULE

May 1991

## American Medicine Today: Perspectives from Maryland

8

- Wednesday
- 8:00 a.m. - Registration
  - 8:30 a.m. - Council Meeting
  - 9:00 a.m. - 5:30 p.m. - **Scientific Sessions** -
    - "Guidelines for Accreditation of CME in Maryland" Workshop ■ "MHA Quality Indicator Project" ■ "Current Progress in Vascular Diagnosis and Therapy" ■ "What Can Computers Do for Physicians?" ■ "Access to Early Cardiac Care - The Missing Strategy"
  - 9:30 a.m. - House of Delegates Meeting followed by General Membership Meeting
  - 12:00 noon - Auxiliary Luncheons
  - 1:30 p.m. - **Plenary Session** - Elizabeth Dole, President American Red Cross
  - 2:00 p.m. - Business Meeting
  - 3:15 p.m. - Exhibitors' Sweepstakes Drawing
  - 6:30 p.m. - Exhibitors' Reception (casual attire)
  - 6:30 p.m. - Evening Entertainment - Women in Medicine Reception followed by *The Capitol Steps*, Washington's Favorite Political Cabaret Troupe

9

- Thursday
- 7:00 a.m. - Prayer Breakfast - Rev. Joseph A. Sellinger, S.J., President, Loyola College of Md.
  - 8:00 a.m. - Registration
  - 9:00 a.m. - Auxiliary Annual Meeting
  - 9:00 a.m. - 5:30 p.m. - **Scientific Sessions**
    - "Managing Diabetes in the 1990s" ■ "Recent Advances in Cardiology" ■ "Astigmatism in Single Stitch vs. Multi Stitch Surgery" ■ "How to Help Your Pregnant Patients Stop Smoking" ■ "Current Treatment of Anxiety and Insomnia" ■ "Ophthalmologic and Dermatologic Aspects of STD" ■ "HIV Today: Transmission, Testing and Treatment" ■ "Treatment of Outpatient Infections" ■ "The Right to Die in Maryland: 1991 (After Cruzan)" ■ "What About Cholesterol In Children" ■ "Problems of the Upper Extremities in Musicians" ■ Maryland Asthma Society Lecture - William Pierson, M.D. ■ "Primary Care of the HIV Positive Patient" ■ "Treatment of Chronic Pain in Patients with Advanced Cancer"
  - 12:30 p.m. - Auxiliary AMA-ERF Auction/Luncheon
  - 3:15 p.m. - Exhibitors' Sweepstakes Drawing
  - 2:00 p.m. - **Plenary Session** - Marilyn Quayle, National Breast Cancer Spokesperson; John Tupper, M.D., President AMA
  - Reception - Dinner

10

Friday

- 8:00 a.m. - Registration
- 9:00 a.m. - 5:30 p.m. - **Scientific Sessions**
  - "Diagnosis and Current Treatment of Multiple Sclerosis" ■ "Current Issues in Rheumatology" ■ "Charting a Course for the 90s - Medical Records Seminar" ■ "Current Concepts in the Care of Patients with Inflammatory Bowel Disease" ■ "G.I. Disorders Among the Elderly; Prevention of NASID-Induced Ulcers" ■ "New Concepts in the Treatment of Hypertension" ■ "Current Concepts in the Care of Patients with IBD" ■ "Technical, Ethical, and Legal Aspects of Surgery without Blood Products" ■ Harry M. Robinson, Jr. M.D. Lecture in Dermatology ■ "Legislative Initiatives Impacting Emergency M.D.'s" (ACEP) ■ Maryland Society of Physical Medicine & Rehabilitation
- 2:00 p.m. - House of Delegates Meeting followed by Council Meeting
- 7:00 p.m. - Annual Presidential Banquet - Honoring Reynaldo L. Lee-Llacer, M.D. (Reservation required - Black Tie optional)

## Auxiliary

### The Auxiliary to the Medical and Chirurgical Faculty of Maryland: 1990-1991

The American Medical Association's (AMA's) Women's Auxiliary was organized in 1922 as the logical outgrowth of state and county auxiliaries already in existence in six states, including Texas, South Dakota, Oklahoma, Maine, Minnesota, and Montana. By 1949, the AMA was anxious to have auxiliaries in all states to help oppose legislative tendencies toward the socialization of medicine. The original purpose of the Women's Auxiliary was to serve as a liaison between the medical profession and the general public. When requested to do so, or whenever the opportunity presented itself, auxiliary members were to be prepared to explain the position of organized medicine.

In September of 1949, The Medical and Chirurgical Faculty of the State of Maryland resolved at its Semi-annual Meeting in Chestertown to form a state

women's auxiliary. On November 15, 1949, the organizational meeting of Med Chi's Women's Auxiliary was held at the Faculty Building, at which time the Bylaws were adopted. Sixteen of Maryland's twenty-four counties were represented.

In 1985, during the tenure of President Mildred Taylor, the name of the Maryland Women's Auxiliary was changed; the word "Women's" was eliminated. Increasing numbers of female physicians have become Med Chi members; as their spouses began to join the Auxiliary, the old name was no longer appropriate. The name, "The Auxiliary to the Medical and Chirurgical Faculty of Maryland," more appropriately reflects the existing make-up of the Auxiliary, and illustrates some of the dramatic changes that have occurred in medicine in recent years. ■

#### Past Presidents

+	Mrs. Thomas A. Christensen	1950-51		Mrs. Leslie R. Miles, Jr.	1973-74
	Mrs. George H. Yeager	1951-52		Mrs. John N. Robinson	1974-75
	Mrs. Charles H. Williams	1952-53		Mrs. Francis C. Mayle	1975-76
	Mrs. John G. Ball	1953-54		Mrs. M. McKendree Boyer	1976-77
+	Mrs. Albert E. Goldstein	1954-55	+	Mrs. Robert E. Broadus	1977-78
+	Mrs. Gerald W. LeVan	1955-56		Mrs. Thomas F. Herbert	1978-79
	Mrs. Homer U. Todd	1956-57	*‡	Mrs. Albert J. Strauss, Jr.	1979-80
	Mrs. David S. Clayman	1957-58		Mrs. R. Kennedy Skipton	1980-81
	Mrs. E. Roderick Shipley	1958-59		Mrs. Paul J. Chang	1981-82
	Mrs. D. Delmas Caples	1959-60		Mrs. Herbert Levickas	1982-83
*	Mrs. William S. Stone	1960-61		Mrs. Edmund Niklewski	1983-84
	Mrs. Norman Oliver	1961-62		Mrs. Charles Taylor	1984-85
	Mrs. Robert P. Conrad	1962-63		Mrs. Bernard S. Karpers, Jr.	1985-86
	Mrs. Walter M. Hammett	1963-64		Mrs. Daniel Howell	1986-87
	Mrs. John E. Baybutt	1964-65		Mrs. Alberto Barretto	1987-88
	Mrs. Martin E. Strobel	1965-66		Mrs. Craig Edmonds	1988-89
	Mrs. Archie R. Cohen	1966-67		Mrs. Ronald Cameron	1989-90
	Mrs. William S. Stone	1967-68		Mrs. Augusto Figueroa	1990-91
	Mrs. H. Leonard Warres	1968-69			
	Mrs. Wallace H. Sadowsky	1969-70	*	Honorary Members	
	Mrs. Raymond M. Yow	1970-71	+	Deceased Members	
	Mrs. Robert E. Reiter	1971-72	‡	AMA Auxiliary, National President	1988-89
	Mrs. Marvin L. Kolkin	1972-73			





**Maryland State President**  
Josefina Figueroa (Mrs. Augusto)



**Allegany County**  
Betty Harvey (Mrs. Jack)



**Anne Arundel County**  
Barbara Strawberry (Mrs. Carl)



**Baltimore City**  
Claire Jensen (Mrs. Allan)



**Charles County**  
Fatima Haziq (Mrs. Mohammed)



**Frederick County**  
Mehry Reid (Mrs. Thomas)



**Harford County**  
ShuShu Mudarris (Mrs. Faysal)



**Howard County**  
Mildred Taylor (Mrs. Charles)



**Montgomery County**  
Sandy Graham (Mrs. Gordon)



**Prince George's County**  
Grace Malouf (Mrs. George, Jr.)



**Washington County**  
Janice McWilliams (Mrs. Wayne)



**Wicomico County**  
Nan Bird (Mrs. Richard)

NOT SHOWN:

**Baltimore County**  
Nancy Lisle (Mrs. Robert)

**Kent County**  
Liz Donovan (Mrs. David)



# Where there's smoke...there may be bronchitis



"Recent research has delineated early, more subtle changes in lung and immune functions. These alterations directly predispose smokers to respiratory tract infection."

*Am Fam Phys* 1987;36:133-140

**Cecilor<sup>®</sup>**  
Pulvules<sup>®</sup> 250 mg  
**cefactor**

**Established therapy  
for today's patients**

For respiratory tract infections due to  
susceptible strains of indicated organisms

#### Brief Summary.

Consult the package literature for prescribing information. Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A  $\beta$ -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

#### Precautions:

- Discontinue Cecilor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Cecilor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Cecilor penetrates mother's milk. Exercise caution in prescribing for these patients.

#### Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions have been reported with the use of Cecilor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, serum-sickness-like reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Cecilor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis,

and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

#### Abnormalities in laboratory results of uncertain etiology.

- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Cecilor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest<sup>®</sup> tablets but not with Tes-Tape<sup>®</sup> (glucose enzymatic test strip, Lilly).

PA 8791 AMP  
Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

*Lilly*

Eli Lilly Industries, Inc.  
Carolina, Puerto Rico 00630  
A Subsidiary of Eli Lilly and Company  
Indianapolis, Indiana 46285

CR-0525-B-049333 © 1990, ELI LILLY AND COMPANY



# American Medical Association

## HARD NEWS: Issues & Answers in Medical Reporting

AMA's Eleventh Annual Health Reporting Conference  
Washington, D.C. • April 18-21, 1991



If you are a medical communicator wishing to sharpen your skills, plan to attend the AMA's Eleventh Annual Health Reporting Conference, Thursday, April 18 through Sunday, April 21, 1991 in Washington, D.C.

This is a unique conference designed for medical reporters, physician broadcasters and medical spokespeople. The conference features a combination of skills development courses in broadcast writing, interviewing, editing and production, plus opportunities to have your tapes critiqued by experts. Network with the pros and learn valuable tips on breaking into the business, developing the skills and dealing with the issues confronting medical broadcasters today.

Faculty includes experienced physician broadcasters, network producers, broadcast consultants, writers, editors, producers and professional speakers trainers.

	Until February 15, 1991	February 16 and beyond*
<b>Fees:</b>		
AMA Member	\$650	\$715
Non-Member	\$825	\$900
Students/Residents	\$250	\$275
Optional Day	\$275	(not available after 2/15 cut-off)
Individual Coaching Sessions	\$ 60	\$ 75

Course tracks are offered in Speakers Training, and Broadcasting (Introductory, Intermediate and Advanced). Electives are open to all participants. Complete registration information is available by calling 312/464-5102.

Fee includes Welcome Reception, April 18, 6:30 p.m., continental breakfasts, luncheons, video and audiotapes, workshops and materials. Please make check payable to the American Medical Association. We will confirm your registration by mail.

\*Registration will be accepted only on a space available basis after the February 15, 1991 cut-off date.

Register by phone or mail. Please register by February 15, 1991. This conference offers small classes, and the AMA cannot guarantee appropriate level placement after the registration cut-off date. To register, complete and return this form and mail in an envelope with your registration fee to:

**AMA Television, Radio and Film Services  
Health Reporting Conference  
515 North State Street, 17th Floor  
Chicago, IL 60610**

Name \_\_\_\_\_ Specialty \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone number \_\_\_\_\_ (office) \_\_\_\_\_ (home)

This conference is  
supported by a grant from  
Pfizer Laboratories and Roerig,  
Divisions of  
Pfizer Pharmaceuticals.



AMERICAN  
MEDICAL  
TELEVISION



**Pharmaceuticals**

Pfizer Labs & Roerig Divisions



### Legal and Ethical Concerns of Your Medical Practice

*This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation, and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the State. The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIII, Section 1). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.*

■ ■ ■

### Physician Participation in Medical Review Activities - Immunity and Legal Defense

**R**eview activities undertaken by various public and private organizations seeking to monitor and improve the performance of health care providers are universally recognized as critical efforts to assure quality health care. Physician participation in these review activities is central to the effectiveness of these activities. However, in the medical community, there is apparently great uncertainty regarding liability of physician participants and the protection of information from disclosure.

Recognizing the need to enact protections in this area, the Maryland General Assembly has enacted a series of statutes providing immunity for those involved in the process and assuring confidentiality of records and information. This article outlines the protections established by law and addresses a related issue: who will represent a physician should his or her actions be challenged or disclosure of records be sought?

#### Purposes of Review Activities

There are three contexts in which medical review occurs. First, the Maryland State Government, acting through the Board of Physician Quality Assurance (BPQA), has established procedures for reviewing the practices of physicians and taking disciplinary actions against a physician's license for incompetence or improper acts. The Medical Practice Act requires that the BPQA refer "any allegation involving standards of medical care" or questions of gross and willful overcharging to a medical society for review by physician peers.<sup>1</sup> Second, hospitals and other health care organizations conduct utilization review, quality assurance, risk management, and credentialing reviews to assure that providers acting under their auspices are doing so properly.<sup>2</sup> Third, professional associations such as the Medical and Chirurgical Faculty of Maryland (Med Chi) and local medical societies have established committees to review and resolve reports and complaints regarding individual practitioners.

In each setting, the purpose of review is to assure quality of care by monitoring the actions of prac-

tioners. In addition, review activities work for the welfare of the physician community by offering opportunities to (1) avoid the loss of professional livelihood through early identification of problems and early intervention, (2) increase awareness of practice standards, (3) provide education focused on identified areas of weakness, and (4) provide or initiate treatment for mental, emotional, or substance abuse problems.

Physician participation in review activities is critical, especially in the licensing and disciplining of physicians. Medical expertise is needed to determine violations of standards of practice and to recommend appropriate action based on medical knowledge and practical experience. The peer review committee structure assures that no single person is able to impose a personal determination of standards of care. Instead, peer reviewers develop a consensus as to whether a standard was violated. Physician participation in peer review activities, therefore, is preferable to the alternative of having a State employee (even a physician) investigate violations of care and recommend appropriate disciplinary action.

#### Protecting the Review Process

Assuring effective review programs requires that participants feel free to express their expert opinions without fear that their candor will be used against them. This requires that records and reports be maintained in strict confidence and that participants be shielded from frivolous lawsuits. As long as participants act fairly and impartially, they should not be forced to justify their actions in court. To protect medical review programs, the State has enacted several statutes providing for participant immunity and prohibiting disclosure of records or information. These laws are intended to insure the privacy of peer review deliberations in order to prevent the chilling effects liability to lawsuit could have on the actions, discussions, and decisions of participants. These laws are also intended to assure confidentiality in treatment, since disclosure would be an impediment to impaired physicians seeking needed help. The protections

available to participants and their records vary according to the setting in which the review activity takes place.

### **Review Activities Delegated by the Board of Physician Quality Assurance**

As indicated above, the BPQA is required to refer certain matters to the Med Chi Faculty or to local medical societies for review. Under procedures developed jointly by Med Chi and the BPQA, matters referred by the BPQA are handled through the Peer Review Management Committee of Med Chi, which distributes them to local medical societies or Med Chi committees. The Med Chi groups generally handling these matters are the Peer Review Committee, the Committee on Drugs, and the Physician/Patient Relations Committee. Physicians in appropriate specialties review the charts and/or the practice of the physician involved, prepare reports of their findings, and make recommendations. The appropriate committee then reviews the reports, and makes recommendations to the BPQA through the Peer Review Management Committee.

In addition, the BPQA has the authority to order a physician to undergo an examination<sup>3</sup> which may be conducted by the Physician Rehabilitation Program of Med Chi. "Physician Rehab" may also become involved in delegated functions of the BPQA after disciplinary action has been taken against a physician's license. The BPQA may issue an order, either after a hearing process or by consent, that places the physician on probation. As part of the physician's probation, he or she may be required to undergo monitoring, education, or treatment under the auspices of the Physician Rehabilitation Program.

Maryland law provides that a person making a complaint to the BPQA is immune from civil liability, as long as he or she acts without malice.<sup>4</sup> In addition, a person who participates in the investigation, deliberations, or decisions of this process is immune from suit as well.<sup>5</sup> An individual performing functions under the auspices of the BPQA will be defended by the State Attorney General's office, as long as his or her actions are within the scope of the duties of the BPQA and he or she acts without malice.<sup>6,7</sup> These two conditions may imply a significant restriction on State legal representation. However they actually reflect the requirement that disciplinary proceedings adhere to basic principles of fairness to license holders.

The law prohibits the government from depriving an individual of life, liberty, or property without due process of law.<sup>8</sup> Maryland's Administrative Procedure Act sets forth minimum requirements for notice and an opportunity for a hearing, before action may be taken against a license of a physician or other individual.<sup>9</sup> In turn, the BPQA has established investigative and hearing procedures that must be followed.<sup>10</sup> In general, a participant in the review

process, whether a BPQA employee or a volunteer working through Med Chi, will be considered as operating within the scope of the authority of the BPQA as long as he or she acts in conformity with the procedures established for the process.

Fairness also requires that participants act without malice. To be lawful, disciplinary actions must be based on articulable, objective criteria and not on improper motives. Improper actions would include actions based on personal bias or economic consideration, such as an intention to interfere with contracts or to limit competition. Where a participating physician acts to harm another physician's practice for personal or economic reasons, the Attorney General's office is unlikely to defend that physician.

Documents and information relating to BPQA-delegated responsibilities are also protected under Maryland law. "Except by the express stipulation and consent of all parties . . . , in a civil or criminal action . . . the proceedings, records, or files of the Board [BPQA] or any of its investigatory bodies are not discoverable and are not admissible in evidence."<sup>11</sup> Furthermore, "the Board [BPQA] or any of its investigatory bodies may not disclose any information contained in a record" of the BPQA.<sup>12</sup>

### **Review Activities by Health Care Organizations**

In addition to medical review committees of the State and its agents, privately owned health care organizations conduct reviews of practitioners operating under their auspices. Maryland law has also provided immunities for what it defines as a "medical review committee" which includes a "risk management, credentialing or utilization review committee . . . of a hospital, related institution" or health maintenance organization, preferred provider organization, independent practice association, or community health center.<sup>13</sup> Under the law, there is immunity "for any action as a member of the medical review committee or for giving information to, participating in or contributing to the function of the medical review committee,"<sup>14</sup> as long as the person "acts in good faith and within the scope of the jurisdiction of a medical review committee."<sup>15</sup> In addition to immunity for participants, records and files "are not discoverable and are not admissible in evidence in any civil action arising out of matters that are being reviewed and evaluated by the medical review committee."<sup>16</sup> Should a medical review committee participant be sued, the hospital or other health organization should provide legal defense. The facility should also provide legal counsel opposing any attempt to discover or use the medical review committee information in any court proceeding.

### **Activities of the Faculty and Local Medical Societies**

Med Chi and local medical societies must refer to the BPQA any complaint setting forth "allegations of



grounds for disciplinary action" under the law.<sup>17</sup> While a review must be delegated by the BPQA to be defended by the Attorney General, these societies may conduct reviews of other medical matters as well. The immunity laws pertaining to medical review committees also pertain to a "committee of the Faculty or any of its component societies or a committee of any other professional society or association composed of providers of health care" when that committee engages in activities to evaluate and improve the quality of health care.<sup>18</sup> Records and files of Med Chi committees are also protected to the same extent as other medical review committee information. In fact, the law provides additional protections for "any record and other information obtained by the Faculty, component society of the Faculty . . . if that record or information identifies any person" and "any record of a proceeding or transaction before the Faculty or one of its committees that relates to an investigation or report . . . as to an allegation of grounds for disciplinary or other action."<sup>19</sup> Such information may not be used in any proceeding.<sup>20</sup> Additional protections are provided for "giving information to any hospital, hospital medical staff, related institution, or other health care facility, alternative health system, professional society, medical school, or professional licensing board."<sup>21</sup>

It is clear that a physician participating in a review activity sponsored by the Faculty, whether or not under the auspices of the BPQA, is granted immunity from suit and has his or her information protected from disclosure. Where the review activity is not conducted under the auspices of the BPQA, or where the BPQA has determined that the participant has acted outside the scope of his BPQA duties, legal representation in the event of a suit will not come from the Attorney General's office. In that event, the participant should look to his or her own liability insurance carrier for assistance. For example, Medical Mutual Liability Insurance Society of Maryland (Med Mutual) has confirmed that physicians are covered under its policies for review activities. According to Med Mutual, coverage is provided for "professional services" which include "service as a member of a formal accreditation, disciplinary, standards review, or similar professional board or committee."<sup>22</sup> Because the records or files of review activities belong to Med Chi or the local society, the Faculty or society will need to respond to any attempt to discover or use information from review activities in court proceedings.

### Conclusion

As seen here, extensive protections exist for the physician who participates in medical review activities. If acting within the authority of the physician licensing agency, he or she is immune from suit and will be defended by the Attorney General, as long as he or she has acted without malice. The BPQA, through the Attorney General, will also protect review information from disclosure.

A physician conducting quality assurance, credentialing, or other medical review for a hospital or other organized health care provider is also immune. The facility will defend the physician from any suit and will act to maintain the confidentiality of review records.

A physician who participates in review activities for Med Chi or a local medical society is also immune and should be defended by his or her own professional liability carrier. Med Chi will intervene when any request for records is made, in order to prevent disclosure of records or information in court proceedings.

### References

1. Health Occupations Article (H.O.), §14-401(b)(2), Annotated Code of Maryland.
2. Hospitals are required to do so by law, Health - General Article, §19-319(d), (e) and (g), Annotated Code of Maryland.
3. H.O., §14-402(a).
4. H.O., §14-412(b); Courts and Judicial Proceedings Article (C.J.), §5-392(c).
5. H.O., §14-412(a); C.J., §5-392(b).
6. Letter from Attorney General's Office to the Medical and Chirurgical Faculty of Maryland dated October 27, 1988.
7. Letter from Attorney General's Office to Baltimore City Medical Society dated July 31, 1989.
8. U. S. Constitution, Amendment V; Maryland Declaration of Rights, Article 24.
9. State Government Article, Title 10, Subtitle 2.
10. Code of Maryland Regulations (COMAR) 10.31.01 and 10.31.02; *Peer Review Handbook for Maryland*, adopted by the Medical and Chirurgical Faculty of Maryland, October 19, 1989 and by the Board of Physician Quality Assurance, October 25, 1989.
11. H.O., §14-410(a).
12. H.O., §14-411(b).
13. H.O., §14-501(b)(5).
14. H.O., §14-501(f).
15. C.J., §5-393.
16. H.O., §14-401 (c)(1).
17. H.O., §14-501(d)(1).
18. H.O., §14-501(b)(2) and (c).
19. H.O., §14-503(b).
20. C.J., §10-205(e).
21. H.O., §14-504(c).
22. Letter from Raymond M. Yow MD, Chairman of the Board of Directors of the Medical Mutual Liability Insurance Society of Maryland, to the Medical and Chirurgical Faculty of Maryland, dated January 9, 1991.

STEPHEN C. BUCKINGHAM, Esq.

Rifkin, Evans, Silver, and Rozner

Counsel to the Medical and Chirurgical Faculty of Maryland ■

## Hotline Numbers for Impaired Professionals

Physicians -- 727-0120

Dentists -- 964-2275

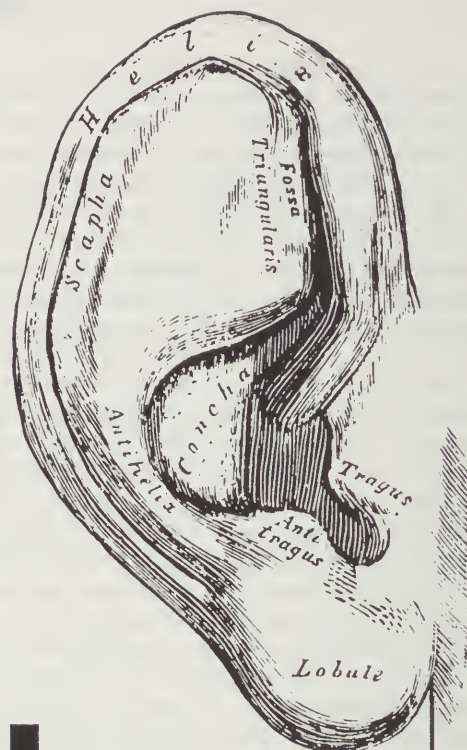
Attorneys -- 685-7878

Pharmacists -- 727-0746

Emergency Psychiatric Beds

800-492-0610

# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas.... and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
m a r y l a n d

Free to Med Chi members.



---

## Word Rounds

---

### "Say Something in Medicine for Us"

Three weeks into my freshman year in medical school, my mother had the entire family over for brunch. Proudly she turned to her only child and in the most accomplished stage whisper said: "Say something in medicine for us." My cheeks flaming, I controlled the vitriolic urge to respond by naming some indelicate perineal organ. Instead, entirely out of character, I reticently stammered some self-conscious apology and demurred.

Of course there had been a jot of humor in my mother's request. And more than an iota of implicit truth. The truth was that our fraternity does speak a foreign tongue. We converse in an idiom filled with scientific Greek and Latin roots, sobriquets, eponyms, acronyms, and other diminutives all peculiar to our professional brotherhood. It is an exotic jargon - scholarly and precise - but often alien to other members of society, and filled with elements of enchantment, dread, and mystery.

In fact, it often is alien to us -- its speakers. As medical neophytes, we are unceremoniously dumped into a unique world without a clue about its history or the origin of its terminology. The truth of a word (Greek: *etymon*) is implied by its **etymology**. Word histories - the derivation of terms - tells us something about what words mean and how they got to mean it. In this column, as it appears from time to time, I will share with you some of those truths which have delighted and stimulated me -- the eccentricities of our medical dialect.

Anatomy is a good place to start. The **mastoid**, that smooth, spherical outcropping of the temporal bone located behind the ear, got its name from some extremely imaginative, if somewhat lecherous, ancient prosector. He thought it looked like a tiny breast (Greek: *mastos* - "breast" + *oides* - "like").

The **duodenum** was named for its length. It was roughly twelve finger-widths long (Latin: *duodecim* - "twelve"). Which, in turn, is from *duo* - "two" + *decem* - "ten". **December** was the tenth month of the Roman calendar, just as **September** was seventh, **October** was eighth, and **November** ninth. Julius and Augustus Caesar, in a frenzy of narcissism, borrowed some days from the others and stuffed two months in between June and September, thus totally obscuring the etymology of the last four months of each year.

**Arteries** are also erroneously named. The word stems from the Greek *arteria* which originates from *aer* - "air" + *tereo* - "to keep." That is, something which holds air or acts as an air duct. At necropsy, arteries are ordinarily found to be empty. To the early anatomists they appeared to carry air, and were thus named. The **jejunum** was also found to be empty during most dissections. Thus, Latin: *jejunus* - "empty" or "hungry." (Do you remember Woody Allen's delicious, droll pomposity in *Annie Hall* - "You are so jejune!")

The names of two arteries are especially intriguing. In ancient Greece, charlatans attracted an audience by stupefying a goat with their hands. They pressed firmly on arteries within the goat's neck and it promptly fell unconscious. The Greek word *karotikos* means "to stun or render unconscious." Thus the carotid arteries were named.

The legend of the second artery begins with Galen. Born in 130 A.D. in Pergamum, Asia Minor (now Bergama, a town in western Turkey), he became physician to the gladiators in Rome. Soon his reputation spread and he became the preeminent physician in the city, attending three emperors. He was the first to recognize that arteries contained blood and, although he had never performed a dissection, his anatomic drawings were regarded as the quintessence of truth and perfection.

Fourteen-hundred years later, they were still venerated with the respect accorded divine revelation. (Medicine had its Dark Ages along with the rest of civilization.) Then Andreas Vesalius was born. He, too, studied the renowned Galen. But in Italy, where he had journeyed following graduation from Montpellier and Paris, physicians were actually performing dissections. There he had the opportunity to verify the accuracy of Galen's work, much of which was found to be flawed. Nonetheless, as Vesalius labored to complete his classic and monumental achievement on the anatomy of the human body, *De Humani Corporis Fabrica*, he used many of Galen's terms to label organs.

In Galen's drawings of the arteries arising from the arch of the aorta, one of the principal vessels had been inadvertently unlabelled. Not finding a name with which to identify that artery, Vesalius - perhaps in a jocular spirit - called it "the anonymous or unnamed" vessel. In Latin it is known as the *innominate* artery.

Of course, some anatomic structures were named, as was the **mastoid**, for their resemblance to other objects. The **coronary arteries** circle the heart like a crown, the Latin for which is *corona*. And the **mitral valve**, with its bicuspid leaflets, looked to some devout anatomist like the twin peaks of a bishop's **miter** - the tall hat worn by the Pope and his bishops. The **coccyx** reminded some prosecutor, who was an avid bird watcher, of the cuckoo's beak. The Greek word for cuckoo was *kokkyx*. The Greek word for crow is *korax* - someone else imagined that the **coracoid** process resembled its bill as well.

Then there are the eponymous structures - those which began life as proper names - only to be lowercased by history. Gabriele Fallopio initiated his career as a canon of the cathedral at Modena. Fortunately for us, he converted to medicine and became the most distinguished of the sixteenth century Italian anatomists. He was Vesalius' favorite pupil and succeeded him as Professor of Surgery and Anatomy at the University of Padua. Fallopio described the fifth,



## MARYLAND KIDNEY STONE CENTER

- Extracorporeal Shock Wave Lithotripsy
- New Physician Incentives
- Convenient Patient Scheduling
- On-site Pre-Admission Testing
- Convenient Location

For Further  
Information  
Contact  
**ALAN WEISMAN**  
ADMINISTRATOR  
301-377-2622

6115 Falls Road • Baltimore, Maryland 21209

A joint venture of five participating hospitals:

Greater Baltimore Medical Center, Sinal Hospital of Baltimore, Union Memorial Hospital, Johns Hopkins Medical Institutions and the University of Maryland Medical System.

## Luxury Homesites

### ABOUT VILLAGER

The Villager name stands for quality built homes and personalized service: use our architects or yours, build on your lot or ours. We can arrange financing, locate a lot for you, and can even sell your old house! So, compare what Villager offers.

### PIKESVILLE

**HELMSLEY COURT LOT 18** - Level treed lot, your architect or ours. One of the last available lots in this prestigious neighborhood. Public water, sewer & gas. Ft. Garrison Elementary.

### CAVES VALLEY

**HUNTINGTON** - Large wooded lot on private drive overlooking new golf course. Excellent investment/superior well yield. Purchase lot or custom build with us.

**NEW**

### HILLSTEAD

**KNOLLCREST FARMS LOT 2** - Fully wooded, beautiful acre plus lot with 10 GPM well. Located at Falls Road and the Beltway for close-in easy access. Build in a neighborhood of million dollar homes. Custom home with lot from \$450,000.



The EURO/CLASSIC I

Lots now also available at  
Huntspring in Ruxton and  
Worthington Park in Owings Mills.

**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

Brokers  
Protected



**McDonogh Crossroads • 20 Crossroads Drive, Suite 113  
Owings Mills, MD • Day 363-0963 • Eve 602-0820**

## Physician Placement Services

The Medical and Chirurgical Faculty of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

**Physician Placement Service**  
**1211 Cathedral St., Baltimore, MD 21201-5585**  
**(301-539-0872)**

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland. **MMJ** announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

eighth, and ninth cranial nerves, the chorda tympani, the placenta, the vagina, and the cochlea of the inner ear, as well as the oviducts which bear his name - the fallopian tubes.

A contemporary and rival of Fallopio was Bartolomeo Eustachio, physician to Pope Julius III and Professor of Anatomy at the Collegio delle Sapienze in Rome. He described the adrenal glands, the sixth cranial nerve, and the thoracic duct, in addition to the tiny tubes which connect the middle ear with the pharynx. The **Eustachian tubes** were named in his honor over a century later by a man named Antonio Maria Valsalva.

Returning for a moment to the Greek word *mastos*: "breast" (as in **mastectomy**, **mastitis** and **mastoid**), I am intrigued to discover that the Greeks enjoyed two additional terms for that unique organ: *mazos* and *mamme*. The latter word was borrowed by the Romans and altered to the Latin *mammae*, from which stem **mammary** and **mammal** (animals which suckle their

young). However, insofar as I can ascertain, there exists only one word which derives from the Greek term *mazos*. That term is used to name a mythological tribe of women living in Scythia near the Black Sea. They were fierce warriors and magnificent archers who, in order to draw their bowstrings further back, cut off their right breasts. They were thus known as a "without" + *mazon* "breast" -- **Amazons**.

There is a curious twist to this etymologic history. In 1543, after participating with Pizzaro in the conquest of Peru, a Spanish explorer named Francisco de Orellana decided to explore the unknown waters of the Marañon River east of Quito. Drifting along with the current, he mapped the entire river to its mouth. Along the way, he was attacked by a fierce tribe of warriors. Orellana insisted they were muscular women who were missing one breast -- **Amazons**.

He had renamed the Marañon.

**BARTON J. GERSHEN MD**  
Editor



# A New Strategy to Improve Patient Care

*We help the physician  
by helping the patient  
help themselves*

**H**ealth can be maintained by teaching patients good care habits. Especially for those with needs related to:

- diabetes including gestational diabetes
- weight reduction and maintenance
- dietary problems of all types
- stress management

Now the time consuming burden of patient training can be transferred from a busy practice to a competent health care team. A certified nurse educator, master trained dietitians and behavior counselors will return the patient well educated to their primary care physician.

Training Programs Include:

## **Diabetes Education**

- 20-hour courses, children and adults
- glucose monitoring
- ambulatory insulin instruction
- diabetes and pregnancy
- gestational diabetes

## **Behavior Modification**

- weight reduction and maintenance
- modified fasting: Optifast
- limited diets: Optitrim
- full food control: LEARN®
- stress management

## **Dietary Counseling**

- all medical disorders

Call for an appointment and further information or have patients schedule a general metabolic assessment at 828-3296.

International  
Diabetes Center

LEARN®

OPTIFAST®  
OPTITRIM®

**GBMC**  
AGENCY, INC.

Greater Baltimore Medical Center  
Physicians Pavilion, Suite 406  
6565 North Charles Street • Baltimore, Maryland 21204

INTERIOR DESIGN • SPACE PLANNING •  
FURNITURE & CABINETRY SELECTION • CUSTOM  
CABINETRY • SURGI-CENTERS • SURGERY &  
AMBULATORY CARE FACILITIES • MEDICAL &  
DENTAL OFFICES • LABORATORIES • MEDICAL  
OFFICE BUILDINGS • CONSTRUCTION  
ADMINISTRATION • COST ESTIMATING



**LEVIN/BROWN & ASSOCIATES**  
ARCHITECTS/INTERIOR DESIGNERS

17 Warren Road  
Suite 7B  
Baltimore, MD 21208  
(301) 486-9006



**TeamCare**  
Infusion Management Services

TeamCare is a clinically specialized provider of infusion therapy services to long term care facilities, hospitals and patients at home.

From clinical office programs to managed care clients, we offer service intensive programs in pediatrics, oncology infectious diseases and nutritional support.

Baltimore, MD  
(301) 498-8928

Washington, DC  
(301) 989-0300

Tidewater, VA  
(804) 473-0304

Philadelphia, PA  
(215) 938-7390



# Enter the Eleventh Annual Med Chi Photo Contest

**Enter early!**

*Deadline for entries is April 19, 1991 ■  
Two categories: Black & White or Color ■  
Open to all Med Chi and Auxiliary Members*

**■ First and Second Prizes Awarded in Each Category ■ All  
Photographs will be displayed at the 1991 Annual Meeting at College Park.**

## *Med Chi Photo Contest Rules*

**Eligibility:** All members of the Faculty and members of the Auxiliary to the Medical and Chirurgical Faculty may enter. Professional photographers may not enter. Members of the Photo Contest Committee and their families are not eligible.

### *Contest Rules:*

1. Photographs may be submitted in two categories: black and white or color.
2. Limit: three entries per person.
3. Prints only, no smaller than 8 X 10 or larger than 11 X 14, will be accepted. If your favorite shot is a slide, you must have a print made to enter in the contest within these size ranges.
4. Entries must be matted or dry mounted. No framed photographs will be accepted.
5. Entries must have name, address, and telephone number attached to the back of each photograph.
6. Entries may be mailed or brought to the Faculty Office, 1211 Cathedral Street, Baltimore, Maryland 21201 by the close of the business day on April 19.
7. Photographs entered in the contest will be on display at the Annual Meeting in May of 1991.
8. Prizes will be awarded to the first and second place winners. Additional information about the prizes will be published in the Journal.
9. Winners will be announced at the Annual Meeting of the Medical and Chirurgical Faculty, May 8-11, 1991.
10. Photographs will not be mailed back. Photographs may be claimed at the exhibit area at the close of the Annual meeting at noon on May 11, or at the Faculty Building thereafter.
11. The Faculty does not guarantee against loss or damage of any kind to the photographs submitted to the contest.



## Board of Physician Quality Assurance Actions

**In the Matter of  
Hwal Chin Chong RA  
Before the  
Maryland Board of  
Physician Quality Assurance**

**Amended Consent Order**

**B**y a Consent order dated August 16, 1989, the Board of Physician Quality Assurance (the Board) agreed to accept the surrender of Hwal Chin Chong RA (the Respondent's) registration to practice acupuncture. The Consent Order provided that Respondent could apply for reinstatement of his registration to practice acupuncture.

Respondent petitioned the Board through its Settlement Conference for reinstatement of his registration on December 5, 1990. At its meeting on December 12, 1990, the Board considered the Settlement Conference's recommendation and voted to amend its Consent Order as follows:

**Findings of Fact**

1. The Findings of Fact of the Board's Consent Order dated August 16, 1989 are incorporated by reference.

2. Respondent's registration to practice acupuncture was surrendered on August 16, 1989. Respondent has not practiced acupuncture since August 16, 1989.

3. Respondent presented the following information as to his activities since August 16, 1989:

- a. Documentation of his taking English courses;
- b. Documentation that Respondent had attended Grand Rounds at Johns Hopkins Hospital;
- c. Documentation of his taking six hours of continuing education in acupuncture; and
- d. The formulation of an agreement with Jane Younghea Lew MD, to be Respondent's supervising physician.

**Conclusions of Law**

The Board incorporates by reference the conclusions of law contained in its Consent Order of August 16, 1989 and further concludes that Respondent's registration is **SURRENDERED** and Respondent can petition the Board for reinstatement of his registration.

**Order**

By a majority vote of the full authorized membership of the Board considering this matter it is hereby this 21st day of January 1991.

**ORDERED** that the Board will not consider Respondent's petition for reinstatement of his registration until such time as Respondent submits evidence of the following:

1. Respondent has taken and passed the Test of Spoken English, with the grade of 220;
2. Respondent has developed an Informed Consent to be used with patients by the supervising physician and to which he must adhere, which has been approved by the Settlement Conference;
3. Respondent has developed a model patient record which he will use, which has been approved by the Settlement Conference; and
4. Respondent has completed all continuing education requirements for two years proceeding the time of the petition for reinstatement, such requirements being forty credits for a two-year period; and be it further

**ORDERED** that in the event that Respondent meets the conditions precedent set forth above, the Board will reinstate Respondent's registration to practice acupuncture subject to the following conditions of probation:

1. Respondent would be permitted to practice under the supervision of Dr. Lew and Respondent would sign a release permitting the Board to receive quarterly reports from Dr. Lew as to the nature of Respondent's practice, the number of patients Respondent is seeing, and the methods by which Respondent is sterilizing his acupuncture equipment;
2. Six months after Respondent returns to practice, he will be subject to practice review, the expense of which would be his responsibility. The practice review would be conducted by a reviewer appointed by the Acupuncture Advisory Council. In the event that the practice review indicated that Respondent was a danger to himself or the public, Respondent's registration could be immediately suspended without prior notice and an opportunity to be heard, provided that Respondent was given a hearing within thirty days of requesting same. The burden of proof in such a hearing would be preponderance of the evidence;
3. Respondent must take twenty additional Category 1 hours of continuing education approved by the Acupuncture Advisory Council;
4. Respondent must keep his patient records in English; and
5. If the practice review indicates Respondent is practicing competently, Respondent can petition the Board to remove all conditions of probation; and be it further

**ORDERED** that this order is considered a public document pursuant to *Maryland State Government Code Ann. §§10-611 et seq.*

*ISRAEL H. WEINER MD*, Chairperson  
Maryland Board of Physician Quality Assurance

## Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of five pages.

1. By signing this Consent, I hereby submit to this Order and its conditions.

2. I acknowledge the validity of this Order and the legal authority of the Board of Physician Quality Assurance to issue and enforce this Order.

3. I acknowledge that by consent to this Order, I am waiving my right to challenge in court the legal authority of the Board of Physician Quality Assurance to take action against my registration to practice acupuncture in the State of Maryland.

I, Hwal Chin Chong RA, have read this Consent Order and have carefully reviewed each and every part with my attorney, Anthony P. Palaigos, Esquire. I understand it and voluntarily agree to it.

I sign and consent to this Order after having an opportunity to consult with counsel and with full understanding of the meaning and the terms of the Order.

IIWAL CHIN CHONG RA

■ ■ ■

**In the Matter of  
Morton Ellin MD  
Before the  
Maryland Board of  
Physician Quality Assurance**

### Final Order

On October 14, 1988, Morton Ellin MD (Respondent) applied for Specialist Identification as an internist to the Board of Physician Quality Assurance (the Board). On June 11, 1990, the Board initially denied his application in accordance with Health Occupations Article (HO) §14-704 of the *Annotated Code of Maryland* and COMAR 10.32.09. Specifically, the Board stated that Respondent lacked sufficient training and adequate clinical experience to be identified as a specialist in Internal Medicine.

On June 20, 1990, Respondent requested a hearing on the Board's initial denial. On August 29, 1990, the hearing commenced before an Administrative Law Judge. Present at the hearing were: Respondent; Leonard Orman, Esquire, representing Respondent; Debra G. Woodruff, Assistant Attorney General, Administrative Prosecutor for the State; Daniel McCrone MD; and Samuel Friedel MD.

### Summary of Evidence

The following exhibits were introduced:

**Hearing Office Exhibit:** The Board's initial denial of Respondent's application.

The State introduced the following documents into the record:

**State Exhibit 1:** The American Board of Medical Specialties (ABMS) Table of recognized specialties, dated March 1988.

**State Exhibit 2:** Medical and Chirurgical Faculty of Maryland (Med Chi) Specialist Identification: Executive Summary.

**State Exhibit 3:** Med Chi Specialist Identification: Policy and Procedures of the Committee on Specialist Identification.

**State Exhibit 4:** Reviewer's Checklist for Physician Specialty Identification.

**State Exhibit 5:** Board of Physician Quality Assurance Evaluation Form completed by Respondent and dated October, 14, 1988.

**State Exhibit 6:** Reviewer's Checklist for Physician Specialty Identification completed by Dr. McCrone acting on Respondent's application.

**State Exhibit 7:** November 15, 1988 letter from Med Chi to the Board recommending the denial of Respondent's application for Specialty Identification.

Drs. Daniel McCrone and Samuel Friedel testified on behalf of the State. Each served on the Committee for Specialist Identification of Med Chi at the time Respondent's application for Specialist Identification was being considered.

The Respondent introduced the following documents into the record:

**Respondent Exhibit 1:** Respondent's Curriculum Vitae.

**Respondent Exhibit 2:** Baltimore County General Hospital *In Focus* publication, Volume III, Issue 1, dated Spring 1989, listing Respondent as a specialist in Internal Medicine.

**Respondent Exhibit 3:** August 27, 1990 letter from Dr. Howard H. Patt.

**Respondent Exhibit 4:** August 29, 1990 letter from Norman Zimmerman MD.

**Respondent Exhibit 5:** August 28, 1990 letter from Deepak Merchant MD.

**Respondent Exhibit 6:** August 28, 1990 letter from Arnold H. Michael MD.

**Respondent Exhibit 7:** August 28, 1990 letter from George H. Greenstein MD.

**Respondent Exhibit 8:** August 28, 1990 letter from Solomon D. Robbins MD.

**Respondent Exhibit 9:** August 28, 1990 letter from Roberto Garcia MD.

**Respondent Exhibit 10:** August 28, 1990 letter from Rodolfo C. Lota MD.

**Respondent Exhibit 11:** August 27, 1990 letter from Simon Calle MD.

**Respondent Exhibit 12:** August 28, 1990 letter from Melvin D. Kopilnick MD.

**Respondent Exhibit 13:** August 27, 1990 letter from Louis H. Tankin MD.

Respondent testified on his own behalf.

On September 6, 1990, the Administrative Law Judge issued a recommended decision including proposed Findings of Fact, Conclusions of Law, and a Recommendation. The parties were informed of their right to take exceptions. By letter dated October 12, 1990, the parties were advised that the Board would make a decision at its meeting on October 24, 1990 on



the recommended decision. The parties filed no exceptions. At the Board meeting on Wednesday, October 24, 1990, the Board voted as follows:

### Findings of Fact

On the basis of the preponderance of evidence, the Board makes the following Findings of Fact:

1. Respondent, a licensed physician in the State of Maryland, applied for Specialist Identification on October 14, 1988.

2. Internal Medicine is a specialty recognized by the ABMS.

3. If a physician is not certified by the ABMS, he/she must complete an application outlining specific training and experience in the requested specialty. The applications are referred by the Board to Med Chi's Committee on Specialist Identification (the Committee) for evaluation and recommendation to the Board.

4. The criteria utilized by the Committee encompass, *inter alia*:

- a. The extent of training in the relevant clinical area or areas;
- b. The length of time the physician has been practicing the specialty;
- c. The hospital activities and privileges as they relate to the specialty;
- d. Continuing medical education courses attended in the last five years in the applicant's area of expertise; and
- e. Recommendations for approved specialists as consultants in the applicant's area of expertise.

5. The Committee, in its Policy and Procedures of the Committee on Specialist Identification, requires that the applicant demonstrate sufficient training in the relevant clinical area, specifically:

Interpretation: ... If the applicant has not completed an accredited training program, the applicant shall meet the following contributory criteria:

- (1) Practices for sufficient time in the specialty;
- (iii) Whether the applicant adequately demonstrates that:
  1. peers refer to the physician as a consultant in the specialty field requested; or
  2. peers have promoted the physician to levels of responsibility within the specialty requested, such as hospital chief of service, department head, or officer in an appropriate specialty society.
- (2) ... maintains hospital privileges and is active in the specialty;
- (3) Maintains appropriate continuing medical education in the specialty over the past five years.

6. The Reviewer's Checklist for Physician Specialty Identification, given to the Committee member selected to review the applicant's application, does not refer to either the statutory criterion regarding a physician's having ethically held himself out as a specialist in the field prior to July 1, 1984 or the policy criteria regarding peer referral to the applicant as a consultant in the specialty field.

7. Drs. McCrone and Friedel testified that as Com-

mittee members they are not permitted to go beyond the information contained in the application in making their recommendations to the Committee.

8. Respondent's application did not contain all of the information necessary in order to make a recommendation in accordance with the statutory and regulatory requirements, nor did it contain information which Med Chi, in its policy guidelines, suggested be considered.

9. At the hearing, Respondent presented information which responded to the statutory and regulatory criteria for Specialist Identification which was not included in his application:

- a. Respondent completed one year of rotating internship at Sinai Hospital from July 1954 to July 1955.
- b. Respondent completed one year of residency at Sinai Hospital from July 1955 to July 1956: nine months in Medicine and three months in Pediatrics.
- c. Respondent practiced two years of adult Internal Medicine for the two-year period that he served as captain in the U.S. Army, from August 1956 to July 1958.
- d. Respondent served as the Chief of the Male Medicine Ward in the U.S. Army 2nd Field Hospital, Munich, Germany.
- e. Respondent's practice was limited to the diagnosis and treatment of adult males during his military service.
- f. From 1952 to 1962, Respondent served on the active staff in Internal Medicine at Lutheran Hospital in Baltimore, MD.
- g. From 1956 to the present, Respondent has been on the visiting staff in Internal Medicine in the Department of Medicine at Sinai Hospital, Baltimore, MD.
- h. From 1963 to the present, Respondent has served on the active staff in Internal Medicine in the Department of Medicine at Baltimore County General Hospital, Baltimore, MD.
- i. Respondent served as Assistant Chief of Medicine at Levindale Geriatric Home, Baltimore, MD, from 1959 to 1972.
- j. Respondent has served as Medical Director for Respiratory Therapy at Baltimore County General Hospital from 1972 to the present.
- k. As Medical Director for Respiratory Therapy at Baltimore County General Hospital, Respondent directs several staff pulmonary specialists.
- l. Respondent heads the Pulmonary Department at Baltimore County General Hospital.
- m. Respondent directs the critical care unit, which combines intensive care and coronary care, at Baltimore County General Hospital.
- n. Respondent's inpatient practice at Baltimore County General Hospital is exclusively adult Internal Medicine.
- o. Respondent has been listed as a specialist in

Internal Medicine at Baltimore County General Hospital in its publication *In Focus*.

- p. From 1963 to 1973, Respondent performed approximately 75 percent of the preoperative evaluations for patients at Baltimore County General Hospital. Preoperative evaluations are requested of internists by surgeons prior to a patient's surgery.
  - q. From 1973 to 1983, Respondent performed approximately 50 percent of the preoperative evaluations for patients at Baltimore County General Hospital.
  - r. Since 1983, Respondent has been in private practice with Dr. Garber, a Board Certified internist.
  - s. Since 1985, Respondent has taken 531 hours of continuing medical education in Internal Medicine.
  - t. Respondent regularly attends medical Grand Rounds at Johns Hopkins Hospital.
  - u. In 1957, the requirements for sitting for Board Certification in Internal Medicine were: one year of internship, one year of approved residency (nine months adequate in Internal Medicine), two years of military service medical practice in an appropriate area, and four years of medical practice (if the military medical practice was not sufficient, then eight years of medical practice was required). Respondent met those qualifications.
  - v. When Respondent was discharged from military service and began in practice, the requirements for sitting for Board Certification in Internal Medicine changed to require three years of an approved residency. As Respondent was already in practice and had financial responsibilities, he did not apply to sit for Board Certification in Internal Medicine.
  - w. In 1972, Respondent sat for Board Certification in Family Practice as he met the requirements for taking the Board Certification examination in that area through the grandfathering clause.
  - x. Respondent was Board Certified in Family Practice in 1972, and recertified in 1978 and again in 1988.
  - y. Respondent scored in the 97th percentile in the Internal Medicine portion and the 63rd percentile in the Gerontology portion of the Family Practice recertification examination in 1988.
  - z. For the past fifteen years, Respondent's medical practice has been 99 percent limited to Internal Medicine and, in the past ten years, he has not treated patients under the age of twenty-five.
  - aa. Respondent is regarded by the medical community as a specialist in Internal Medicine.
  - bb. Respondent, prior to July 1, 1984 and continuing, has ethically held himself out to be a specialist in Internal Medicine.
10. Respondent, in his application for specialist identification, referred to his practice as "general

medicine" as he did not believe that he should use the designation "internal medicine" without the benefit of specialist identification from the Board. However, he has since amended his CV to reflect Internal Medicine as the nature of his practice.

11. The Committee did not have sufficient information to make an informed determination as to whether Respondent met the criteria for specialist identification as an internist.

### Conclusions of Law

On the basis of the preponderance of the evidence presented at the hearing as detailed in the above Findings of Fact, the Board concludes that Respondent demonstrated sufficient training and adequate clinical experience to meet the criteria set forth in the statute and regulations for specialist identification.

### Order

Based upon the foregoing Findings of Fact and Conclusions of Law, it is this 27th day of November 1990, by the Board of Physician Quality Assurance

ORDERED that Morton J. Ellin MD is approved as a specialist in Internal Medicine; and be it further

ORDERED that this is a final order and as such is considered a public document pursuant to State Government Article, *Annotated Code of Maryland*, §§10-611 *et seq.*

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance



**In the Matter of  
Alan Franklin Knull MD  
Before the  
Maryland Board of  
Physician Quality Assurance  
Surrender of License**

December 6, 1990

Dear Dr. Weiner and Members of the Board:

Please be advised that I have decided not to renew my license, however I have been informed that under Health Occupations Article (HO) §14-503, I can not allow my license to lapse while under investigation unless the Board agrees to accept this lapse. I have been informed that the Board did not accept this lapse, therefore I have decided to surrender my license, #D31721, which entitles me to practice medicine in the State of Maryland. I understand that the Board of Physician Quality Assurance (the Board) decided to accept my license on September 26, 1990.

My decision to surrender my license has been



prompted by an investigation by the Board. The Federation of State Medical Boards reported that the Ohio State Medical Board indefinitely suspended my license on June 16, 1989. The suspension of my license was upheld following an appeal. Based upon this information, the Board voted to charge me pursuant to HO §14-504(a)(21) with underlying grounds of HO §14-504(A)(4) and (22).

The pertinent provisions of HO §14-504(a) provide:

- (21) Is disciplined by a licensing or disciplinary authority...for an act that would be grounds for disciplinary action under this section;
- (4) Is professionally...incompetent;
- (22) Fails to meet the appropriate standards as determined by appropriate peer review for delivery of quality medical and surgical care...;

My decision to surrender my license as a physician has been prompted by my desire to have this matter resolved without formal disciplinary action. In executing this letter of surrender, I understand and agree that I can apply for reinstatement of my license. If I apply for reinstatement, I bear the burden of proving to the Board that I am competent to practice medicine. The Board may require that I take a test to evaluate my competency, such as the Special Purpose Examination. I would bear the cost of any such evaluation. In other words, I must demonstrate that I have the cognitive and clinical competence to practice medicine and have the requisite of good moral character. Additionally, I would have to fulfill any other requirements for reinstatement such as continuing education.

I understand that I may not give medical advice to any individual, for compensation or otherwise, and cannot prescribe medication in the State of Maryland. In other words, I understand that the surrender of my license means that I am in the same position as an unlicensed individual in the State of Maryland.

I understand that the Board will acknowledge to the Federation of State Medical Boards and the National Practitioner Data Bank that I have surrendered my license as a resolution of the matters pending against me. This letter of surrender is a public document.

Finally, I wish to make clear that I have had an opportunity to consult with an attorney before signing this letter SURRENDERING my license to practice medicine in Maryland. I understand this letter of surrender fully. I make this decision voluntarily and knowingly.

ALAN FRANKLIN KNULL MD

On behalf of the Board of Physician Quality Assurance, on this 28th day of December 1990, I accept Alan Franklin Knull's surrender of his license to practice medicine in Maryland pursuant to HO §14-503.

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

**In the Matter of  
Martin Meltzer MD  
Before the  
Maryland Board  
of Physician Quality Assurance  
Surrender of License**

November 28, 1990

Dear Dr. Weiner and Members of the Board:

Please be advised that I have decided to surrender my license, #D07491, which entitles me to practice medicine in the State of Maryland. I understand that the Board of Physician Quality Assurance (the Board) decided to accept my license on November 28, 1990. This decision is IRREVOCABLE.

My decision to surrender my license has been prompted by an investigation by the Board. That is, the Federation of State Medical Boards reported that I had surrendered my license in New York State while under charges for professional misconduct. Specifically, the New York Board had accepted my surrender. Based upon this information, the Board voted to charge me pursuant to Health Occupations Article (HO) §14-504(a)(1) and (25) with underlying grounds of HO §14-504 (a)(3) and (4).

The pertinent provisions of HO §14-504 (a) provide:

- (1) Fraudulently or deceptively obtains or attempts to obtain a license for the applicant...;
- (25) Was subject to investigation or disciplinary action by licensing or disciplinary authority...for an act that would be grounds for disciplinary action under this section and the licensee,
  - (i) Surrendered the license by the state or country to the state or country;
- (3) Is guilty of immoral or unprofessional conduct in the practice of medicine;
- (4) Is professionally...incompetent.

My decision to surrender my license as a physician has been prompted by my desire to have this matter resolved without formal disciplinary action.

I understand that I may not give medical advice to any individual, for compensation or otherwise, and cannot prescribe medication in the State of Maryland. In other words, I understand that the surrender of my license means that I am in the same position as an unlicensed individual in the State of Maryland.

I understand that the Board will acknowledge to the Federation of State Medical Boards and the National Practitioner Data Bank that I have surrendered my license as a resolution of the matters pending against me. This letter of surrender is a public document.

Finally, I wish to make clear that I have had an opportunity to consult with an attorney before signing this letter SURRENDERING my license to practice medicine in Maryland. I understand this letter of surrender fully. I make this decision voluntarily and knowingly.

MARTIN MELTZER MD

On behalf of the Board of Physician Quality Assurance, on this 21st day of December 1990, I accept Martin Meltzer's surrender of his license to practice medicine in Maryland pursuant to HO §14-503.

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

■   ■   ■

**In the Matter of  
Louis J. Pratt MD  
Before the  
Maryland Board of  
Physician Quality Assurance**

**Order for Reinstatement of a License**

**B**y Final Decision dated August 6, 1990, the Board of Physician Quality Assurance (the Board) voted to suspend the license of Louis J. Pratt MD (the Respondent). The Final Decision stated that prior to Respondent's petitioning for reinstatement of his license, by requesting a stay of the suspension of his license, Respondent must successfully complete a recordkeeping course approved by the Board, and surrender his Maryland Controlled Dangerous Substance permit and his Federal Drug Enforcement Administration (FDEA) registration certificate.

Respondent petitioned the Board through its Settlement Conference for reinstatement of his license on December 5, 1990. At its meeting on December 12, 1990, the Board considered the Settlement Conference's recommendation and voted to amend its Final Decision as follows:

**Findings of Fact**

1. The Findings of Fact of the Board's Final Decision dated August 6, 1990 are incorporated by reference.
2. Respondent's license was suspended on August 6, 1990.
3. Prior to petitioning the Board to stay the suspension of his license, thus reinstating Respondent's privilege to practice medicine, the Respondent was required to:
  - a. Within three months of the date of the suspension, demonstrate that Respondent successfully completed a recordkeeping course approved by the Board, Respondent bearing all expenses of this course; and
  - b. Demonstrate that Respondent had surrendered his Maryland Controlled Dangerous Substance permit and his FDEA registration certificate by executing the form provided to Respondent by the Board.
4. Respondent presented the following information at the Settlement Conference:

- a. Respondent was given a medical knowledge evaluation by Edward J. Kowalewski MD, Professor Emeritus, School of Medicine, University of Maryland at Baltimore, Department of Family Medicine on September 25, 1990;
- b. On November 6, 1990, Respondent took an intense course on office medical records from Dr. Kowalewski;
- c. By letter dated November 9, 1990, Dr. Kowalewski submitted his report and recommendation to the Board; and
- d. Respondent surrendered his Maryland Controlled Dangerous Substance permit and his FDEA registration on August 6, 1990.

5. Respondent petitioned the Board to stay the suspension of his license and permit him to practice medicine at the Social Security Administration as a medical consultant following a training program.

**Conclusions of Law**

The Board incorporates by reference the conclusions of law contained in its Final Decision of August 6, 1990 and further concludes that Respondent's license was **SUSPENDED**; and the Board further

**CONCLUDES** that Respondent successfully completed a recordkeeping course approved by the Board within three months from the date of the Final Decision; and the Board further

**CONCLUDES** that Respondent surrendered all drug prescribing permits within three months from the date of the Final Decision.

**Order**

By a majority vote of the full authorized membership of the Board considering this matter it is hereby this 21st day of December 1990

**ORDERED** that the **SUSPENSION** of Respondent's license to practice medicine in Maryland is hereby **STAYED**; and be it further

**ORDERED** that Respondent is subject to the following conditions of **PROBATION**:

1. Respondent shall not prescribe any medication for which a State or Federal permit is required;
2. Respondent may only practice medicine as a medical consultant at the Social Security Administration; and
3. Respondent must take twenty-five additional Category 1 hours of continuing education each year during the probation, which is approved by the Board or the Settlement Conference; and be it further

**ORDERED** that in the event that the Respondent terminated his position at the Social Security Administration, he must notify the Board within twenty-four hours of his termination; and be it further



ORDERED that if the Board receives a report that Respondent has violated a term of probation, the Board, without prior notice and an opportunity to be heard, may lift the stay of suspension of Respondent's license, provided that Respondent is given immediate notice of the charges and an opportunity to be heard thirty days after requesting same. Any findings made in such a hearing shall be by a preponderance of the evidence; and be it further

ORDERED that this Order is considered a public document pursuant to *Maryland State Government Code Ann.*, §§10-611, *et seq*

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of six pages.

1. By signing this Consent, I hereby submit to this Order and its conditions.

2. I acknowledge the validity of this Order and the legal authority of the Board of Physician Quality Assurance to issue and enforce this Order.

3. I acknowledge that by consent to this Order, I am waiving my right to challenge in court the legal authority of the Board of Physician Quality Assurance to take action against my license to practice medicine in the State of Maryland.

I, Louis J. Pratt MD, have read this Consent Order and have carefully reviewed each and every part with my attorney, Norman Polovoy, Esquire. I understand it and voluntarily agree to it.

I sign and consent to this Order after having an opportunity to consult with counsel and with full understanding of the meaning and the terms of the Order.

LOUIS J. PRATT MD



In the Matter of  
Waheeda S. Qaiyumi MD  
Before the  
Maryland Board of  
Physician Quality Assurance  
  
Amended Final Decision

By Final Decision dated November 6, 1989, the Board of Physician Quality Assurance (the Board) voted to revoke the license of Waheeda Qaiyumi MD (the Respondent). The Final Decision stated that on or after October 1, 1990, Respondent could petition the Board for reinstatement of her

license but that in no event would Respondent's license be reinstated prior to November 27, 1990.

Respondent petitioned the Board through its Settlement Conference for reinstatement of her license on December 5, 1990. At its meeting on December 12, 1990, the Board considered the Settlement Conference's recommendation and voted to amend its Final Decision as follows:

### Findings of Fact

1. The Findings of Fact of the Board's Final Decision dated November 6, 1989 are incorporated by reference.

2. Respondent's license was revoked on November 6, 1989.

3. Prior to the Board's issuing charges which formed the basis for the Board's Final Decision of November 6, 1989, the Board had initiated an investigation into Respondent's medical practice. Before the Board issued its Final Decision, the Board received a peer review report that indicated that Respondent was practicing substandard medicine. The Board voted to charge Respondent on July 12, 1989, based on this report under HO §14-504(a)(4) and (22). However, because of the Board's action in Case Number 88-0359, this action was stented and charges did not issue.

4. Respondent presented the following information to the Board as to her activities since November 6, 1989:

- Documentation of continuing education taken in the area of medical business records;
- Documentation that Respondent had notified her patients that she was ceasing the practice of medicine; and
- Letters of recommendation from former patients

### Conclusions of Law

The Board incorporates by reference the Conclusion of Law contained in its Final Decision of November 6, 1989 and further concludes that Respondent's license is REVOKED and Respondent can petition the Board for reinstatement of her license.

### Order

By a majority vote of the full authorized membership of the Board considering this matter, it is hereby this 21st day of December 1990

ORDERED that the Board will not consider Respondent's petition for reinstatement of her license until such time as Respondent submits evidence of the following:

- Respondent has completed all continuing education requirements for three years proceeding the time of the petition for reinstatement, such re-

quirements being a total of one-hundred-and-fifty credits for this time;

2. Respondent submits an analysis and evidence of the continuing education courses taken in medical billing since the date of the Board's first Settlement Conference in this case in January of 1989, which courses cannot be used to fulfill the required continuing education credits; and
3. Respondent has been evaluated by Edward J. Kowalewski MD, Professor Emeritus, School of Medicine, University of Maryland at Baltimore, Department of Family Medicine (the Evaluator). The evaluation would cover an overview of Respondent's practice and focus upon Respondent's knowledge and practice of Family Practice. Respondent would bear the expense of this evaluation and must sign releases permitting the Board to give the Evaluator information to assist in the evaluation, permitting the Board to inform the Evaluator of the final resolution of this matter, and permitting the Evaluator to forward his report to the Board. Respondent must comply with all reasonable requests of the Evaluator; and be it further

ORDERED that in the event that the Evaluator's report reveals no deficiencies, the Board would stay the revocation of Respondent's license subject to the following conditions of probation:

1. Respondent would be permitted to return to a practice setting approved by the Settlement Conference and practice under supervision; and Respondent would sign a release permitting the Board to receive monthly reports from Respondent's supervisor;
2. Respondent takes and passes the first available Special Purpose Examination (SPEX) with a minimum score of 75. Respondent shall bear the expense of taking this examination; and be it further

ORDERED that in the event Respondent fails the SPEX, the stay on the revocation of Respondent's license would be lifted; and be it further

ORDERED that in the event that Respondent passes the SPEX and her supervisor's reports are satisfactory, Respondent would be permitted to practice without supervision in a practice setting approved by the Board of the Settlement Conference, subject to the following conditions:

1. For three years, Respondent would be subject to practice reviews, the expense of which would be her responsibility. In the event that the practice review indicated that Respondent was a danger to herself or the public, the stay of revocation would be lifted without prior notice and an opportunity to be heard, provided that Respondent was given a hearing within thirty days of requesting same.

The burden of proof in such a hearing would be the preponderance of the evidence; and

2. Respondent must take twenty-five additional Category 1 hours of continuing medical education each year during the probation, approved by the Board or the Settlement Conference; and be it further

ORDERED that in the event that the Evaluator's report reveals deficiencies in Respondent's medical practice, Respondent must remediate the enumerated deficiencies and follow any reasonable recommendations given by the Evaluator prior to petitioning the Board for reinstatement of her license; and be it further

ORDERED that in the event that the Board stays the revocation of Respondent's license and thus reinstates Respondent's license, the Board can impose any additional normally reasonable conditions of probation; and be it further

ORDERED that this Order is considered a public document pursuant to *Maryland State Government Code Ann.*, §§10-611, *et seq.*

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of seven pages.

1. By signing this Consent, I hereby submit to this Order and its conditions.

2. I acknowledge the validity of this Order and the legal authority of the Board of Physician Quality Assurance to issue and enforce this Order.

3. I acknowledge that by consent to this Order, I am waiving my right to challenge in court the legal authority of the Board of Physician Quality Assurance to take action against my license to practice medicine in the State of Maryland.

I, Waheeda S. Qaiyumi MD, have read this Consent Order and have carefully reviewed each and every part with my attorney, David S. Harvis, Esquire. I understand it and voluntarily agree to it.

I sign and consent to this Order after having an opportunity to consult with counsel and with full understanding of the meaning and the terms of the Order.

WAHEEDA S. QAIYUMI MD

### Maryland Advertisers

To advertise in **MMJ** call Network Publications  
301-235-0500

Area meetings and course announcements  
are listed each month under  
**Doctors Note**



## Marcia C. Noyes: Making a Life

The week of April 14-20, 1991 has been designated as National Library Week (NLW), a time to recognize the contributions made by all types of libraries to the citizens of the United States. Sponsored by the American Library Association (ALA), NLW is also endorsed by the Medical Library Association (MLA) and the Special Libraries Association (SLA). The 1991 theme is "Read. Succeed." During this same week SLA is also sponsoring the first International Special Librarians Day on April 18. Their slogan is "Information beyond borders: Building global partnerships."

Med Chi's library has been very fortunate to have a number of librarians who exemplified both these motifs. The most notable was Marcia Noyes (Figure 1), our librarian from 1896 until 1946, a period of fifty years. She came to Med Chi shortly before our centennial year, when the collection included approximately 7,000 volumes.<sup>1</sup> This was in the days before Library of Congress catalog cards, National Library of Medicine classification, American Library Association filing rules, or the Regional Medical Library system.

Ms. Noyes' long tenure as librarian and Faculty secretary is, in large part, due to another of Med Chi's legends. Dr. William Osler, who was appointed as a professor at the brand new Johns Hopkins School of Medicine in 1894, was disappointed to find a small, disorganized, and outdated library collection at Med Chi. When he became president of the Faculty in 1896, he had the authority to improve the library, both financially and organizationally. Osler determined that "an intelligent, dedicated, full-time medical librarian"<sup>1</sup> was just what the collection needed. For recommendations, he turned to Dr. Bernard Steiner, head librarian at Enoch Pratt Free Library. Steiner immediately suggested Marcia Noyes.

A native of New York, Ms. Noyes was a graduate of Hunter College with no previous medical training. During an extended visit with her sister here in Baltimore, she took what was intended as a temporary job at the Pratt Library. Ms. Noyes had been at Pratt for about three years, working at stock-taking and cataloging, when she met with Dr. Osler.<sup>1</sup> Osler and the other physicians who interviewed her knew a good thing when they saw it. As Noyes herself described it: "In less than two weeks from the time I learned of the existence of such an organization, I found myself domiciled on the third floor (Figure 2)."<sup>2</sup>

With characteristic modesty, Noyes admitted she had no medical background: "I take no credit for special fitness for the position, except that I could fill the requisite that I must reside in the library building."<sup>2</sup> This was so the library could be open twenty-four hours a day, which was customary for medical libraries of the time. Years later, Noyes described her initial



Figure 1. A formal portrait shows Marcia Noyes as she appeared at the beginning of her career.

feelings of inadequacy: "[M]y first reader was, I believe, Dr. John Ruhrah, sent up. . . to pass judgment on the new librarian. I have always wondered what the report was, for I was on my hands and knees wrestling with some huge old A.M.A.'s in the Journal Room. . . The carpets and booklined walls deadened all sounds, and such a surprise attack made the move of my desk to the first floor a necessity. I have never forgotten it, nor my chagrin."<sup>2</sup>

Soon the executive abilities Osler had recognized came to the fore. In her first year on the job, Ms. Noyes developed her own book classification system based on *Index Medicus*. She plied various Faculty members with medical questions until she was confident in her own knowledge of the literature and terminology. Finances were so tight that Noyes had only one assistant for the first ten years, a janitor. Several former colleagues from Pratt were drafted to do cataloging in the evenings.<sup>1</sup> She borrowed and begged supplies, while encouraging wealthy physicians to make substantial donations. Perhaps her most difficult task was erasing



the uncertainty and sometimes even hostility of the conservative, mostly male physicians regarding a young, single, female librarian. She attended virtually every Faculty function and made a point of keeping abreast of all activities.<sup>3</sup>

One of Ms. Noyes' most satisfying accomplishments was the completion of the Faculty's current building in 1909. This entailed an entire year of constant fundraising, as well as four weeks of actual moving.<sup>2</sup> In between, Noyes made it her business to keep track of construction, insisting that agreed upon specifications be met, and climbing about the half-finished structure.<sup>3</sup> She even planted flowers around the building. Her new quarters were on the fourth floor, in what she often referred to as Baltimore's first penthouse.<sup>1</sup>

Marcia Noyes was not only the Faculty's first trained librarian, but virtually its entire staff for some time. As the Faculty grew larger and more complicated, it reorganized in 1904 according to American Medical Association guidelines. Ms. Noyes became Faculty Secretary and in 1925 her title became Executive Secretary.<sup>3</sup> During her tenure, the Faculty provided staffing for the Board of Medical Examiners, the Baltimore City Medical Society, and the Nurses' Directory.<sup>2</sup>

By the time Noyes retired nearly half a century later, both the library and the Faculty had come a long way. The collection had increased to some 65,000 volumes and the library had invested funds of 90,000 dollars.<sup>1</sup> The Faculty staff had grown to ten,<sup>2</sup> with the newest employee having fourteen years with the association. The staff was extremely loyal to Ms. Noyes, especially appreciating her habit of giving credit for successes to others and taking the blame for failures herself.<sup>1</sup>

Marcia Noyes also had an impact on the library

profession. In 1898, she participated in the founding of what is now the Medical Library Association (MLA). The eight charter members decided that the objectives of the new association would be to promote medical libraries and expedite the exchange of medical literature.

One of the most important functions of MLA was the Exchange, through which members traded duplicate items for those needed. Beginning in 1900, Ms. Noyes directed the Exchange. However, by 1904 the Faculty no longer had the extra space required to store and manage the surplus materials, so the Exchange operations were transferred to New York. After several years of mismanagement, the Exchange and MLA were on the verge of collapse. In 1909, the MLA secretary appealed to Ms. Noyes to take over the Exchange. With the help of Dr. John Ruhrah, who was then MLA treasurer, the Exchange gradually revived. In 1926, due to the increased work involved, Noyes again relinquished responsibility for the Exchange.

Ms. Noyes was also instrumental in the establishment of a journal for the new association. She was one of the editors of MLA's second attempt, the *Bulletin of the Association of Medical Librarians*, published in 1902. After another failed journal, MLA tried again with the *Bulletin of the Medical Library Association*. The team of Noyes and Ruhrah edited the first issue in 1911. Ms. Noyes and Dr. Ruhrah remained as editors until 1926, leaving a viable publication<sup>1</sup> that still serves as MLA's official journal today.

The respect MLA felt for Marcia Noyes was evidenced by her election as the Association's president in 1934. This was especially significant since she was the first non-physician president, as well as the first woman president. The accomplishments Ms. Noyes listed as most important during her presidential year were the incorporation of the Association and adoption of a seal. Association members urged her to accept another year as president, but she declined.

Both the Medical Library Association and the Faculty recognized the unique value of this woman, full of boundless energy and administrative talent. Shortly after her death in 1948, MLA initiated the Marcia C. Noyes Award for outstanding achievement in the field of medical librarianship. While Ms. Noyes always insisted she was not a professional woman, she certainly dedicated most of her life to medical librarianship.<sup>1</sup>

Fortunately, the Faculty was able to show its appreciation during Ms. Noyes's lifetime. The respect members had for her is reflected in the remarks of Dr. Henry M. Fitzhugh,



Figure 2. This photograph, taken in her apartment at 847 North Eutaw, the prior home of Med Chi, shows some of Ms. Noyes' many interests.





**Figure 3.** This photograph accompanied an article in the **Baltimore Sun**, honoring Miss Noyes on the occasion of her fiftieth anniversary at the Medical and Chirurgical Faculty of Maryland.

President during the library's centennial year of 1930: "[A]n enterprise which has as many details to look after as this Faculty and its library have, does not run itself. . . It must have the unselfish service of someone who has not only fine capacity, but whole-souled loyalty as well. . . for over one-third of its life our library has been the beneficiary of just such service as I have mentioned. . . the one who has dedicated her very life to our interests is our splendid friend, Miss Noyes."<sup>2</sup>

With the approach of Noyes's fiftieth anniversary (Figure 3) as Faculty librarian, a committee was formed to arrange a reception in her honor. Finding that the celebration was scheduled during the annual meeting in April, Ms. Noyes insisted that it be put off until the true anniversary in November. The physicians, however, were concerned about her failing health. For possibly the first time in memory, Ms.

Noyes was overruled and the tribute was held April 24, 1946. Over 250 physicians attended,<sup>1</sup> hearing addresses by Dr. Harry Friedenwald, a fifty-year member of the library committee, and Mary Louise Marshall, librarian at Tulane Medical School.

Marcia Noyes retired in July of 1946 and died on November 24 of the same year.<sup>4</sup> She had requested that her funeral be held in the building she considered her home, the Faculty's headquarters.<sup>1</sup> Hers is the only funeral ever to be held here. The service was conducted in Osler Hall,<sup>4</sup> with some sixty physicians from all over Maryland acting as honorary pallbearers.<sup>1</sup> Ms. Noyes is buried in Greenmount Cemetery, under a plain stone that reads only "MARCIA C. NOYES 1869--1946."<sup>5</sup>

Both the Faculty and the medical library profession are indebted to this unassuming, gracious woman. She took a small, disorganized collection with no staff and no budget, and painstakingly turned it into one of the most important special libraries in the region.<sup>4</sup> Her organizational abilities kept the Medical Library Association from drowning in red ink and mismanagement at several crucial times. With her dedication to the future, she helped shape the vocation of medical librarianship. Marcia Noyes herself would doubtless have discounted such high praise, probably replying simply: "If I have accomplished anything, let that speak for me, as while making a

living, I tried to make a life."<sup>1</sup>

## References

1. Smith BT. Marcia Crocker Noyes, medical librarian: the shaping of a career. *Bulletin of the Medical Library Association* 1974 Jul; 62(3):314-24.
2. Celebration of the Centennial of the Library of the Medical and Chirurgical Faculty of the State of Maryland 1830-1930. Baltimore: the Faculty, 1931.
3. Jensen JE. Med Chi's diligent ghost. *Md State Med J* 1985 Mar; 34(3):241-3.
4. French JC. Celebration of the Sesquicentennial of the Medical and Chirurgical Faculty of the State of Maryland 1799-1949. Baltimore: the Faculty, 1949.
5. Noyes' tombstone. Greenmount Cemetery, Baltimore, MD.

**SUSAN E. HARMAN MSLS, MED**

Associate Librarian

Medical and Chirurgical Faculty of Maryland

# Q

## If these are your Questions:

What is meant by impairment?

When considering self-disclosure,  
what issues should be taken into account?

How will others react to my  
self-disclosure?

Should I tell my colleagues?

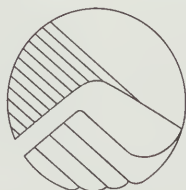
What should I tell my patients?

What should I say on applications for  
privileges, licensing, etc.?

# &

# A

## The Physician Rehabilitation Committee Has the Answers



For a free copy of "To Disclose or Not to Disclose," a brochure of questions and answers on the topic of self-disclosure for the physician recovering from impairment or illness, published by the Physician Rehabilitation Committee of the Medical and Chirurgical Faculty of Maryland as a service to all Maryland physicians, members and non-members, write to Med Chi, Physician Rehabilitation Committee, 1204 Maryland Avenue, Baltimore, MD 21201 or call (301) 962-5580 or toll free (800) 992-7010.

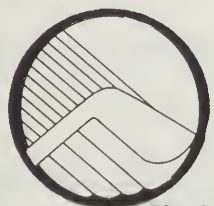


# UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

<b>April 3 &amp; June 5</b>	<b>Subspecialty Care in General Practice</b> , at the University Club, Baltimore, MD. 1 Cat 1 AMA/PRA credit per date. Fee: \$50. Info: 301-328-3103.
<b>April 22-23</b>	<b>Infectious Diseases in Everyday Medicine</b> , at the Baltimore Convention Center, Baltimore, MD. 12 Cat 1 AMA/PRA credits; 12 AAFP prescribed hours; 12 ACEP credit hours. Fee: \$125.
<b>April 25</b>	<b>Dean's Conference Number 6: Clinical Medicine for the Community Physician; Topics in OB/GYN and Pediatrics</b> , at Washington County Hospital, Hagerstown, MD. 3 Cat 1 AMA/PRA credits; 3 AAFP prescribed hours. Fee: \$35.
<b>May 2-5</b>	<b>4th Annual Trauma Anesthesia and Critical Care Symposium</b> , at the Hyatt Regency, Baltimore, MD. 25 Cat 1 AMA/PRA credits. Fee: \$550 physicians. Info: 301-328-2628.
<b>June 7-8</b>	<b>Current Practical Concepts in Endocrinology and Metabolism</b> , at Harbor Court Hotel, Baltimore, MD. 10 Cat 1 AMA/PRA credits. Fee: \$150.
<b>June 23-28</b>	<b>17th Annual Family Medicine Review Course</b> , at the Carousel Hotel, Ocean City, MD. 20+ Cat 1 AMA/PRA credits; 20+ AAFP prescribed hours. Fee: \$395.
<b>June 27-28</b>	<b>10th Annual Update in Obstetrics and Gynecology</b> , at the Annapolis Waterfront Hotel, Annapolis, MD. 14 Cat 1 AMA/PRA credits; 14 ACOG cognates. Fee: \$225.
<b>June 28-30</b>	<b>Dermatology Days</b> , at the Carousel Hotel, Ocean City, MD. 14 Cat 1 AMA/PRA credits; 14 AAFP prescribed hours. Fee: \$250.
<b>Continuously Throughout the Year</b>	<p><b>University of Maryland Dean's Conferences</b> - Held monthly, October through April. Designed for the family/general practitioner and internist. Each conference highlights different clinical departments placing emphasis on the practical methods being used and researched at the University of Maryland. Extension programs are being planned to complement the programs held on the University's Baltimore campus.</p> <p><b>Visiting Professor Program</b> - A directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.</p> <p><b>Visiting Practitioner Preceptorships</b> - Opportunities for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Hour-for-hour Cat 1 AMA/PRA credits available. Direct all inquiries to CME 301-328-3956.</p> <p><b>Departmental Rounds and Conferences</b> - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.</p>

# We've moved to: 1204



Physician  
Rehabilitation  
Committee

The Physician Rehabilitation Program  
of the Medical and Chirurgical Faculty of Maryland  
is pleased to announce the relocation of  
its offices as of March 1, 1991

Our new address is:  
**1204 Maryland Ave.  
Baltimore, MD 21201**

Our new numbers are:  
**(301) 962-5580 or  
(800) 992-7010**

**24 Hour Message Line: (301)727-0120**

*Please note the changes*

## MISCELLANEOUS MEETINGS

- April 8-10**      **The National Conference on Cholesterol and High Blood Pressure Control** in Washington, D.C. Info: 301-951-3275.
- April 10-14**      **First World Congress on Stress, Trauma, and Coping in the Emergency Services Professions**, sponsored by the American Critical Incident Stress Foundation, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Jeffrey T. Mitchell PhD, 301-750-0856.
- April 17-21**      **Fifth Annual Review and Update Course in Critical Care Medicine**, sponsored by the Society of Critical Care Medicine and Rush Presbyterian-St. Luke's Medical Center, at the Crowne Plaza Hotel in Rockville, MD. 37.5 Cat 1 AMA/PRA credits; 37.5 ACEP credits. Fee: \$695 physicians; \$525 physicians in training and allied health professionals. Info: Svetlana Lisanti, 201-385-8080.
- April 18-21**      **Hard News: Issues & Answers in Medical Reporting: Eleventh Annual AMA Health Reporting Conference**, in Washington, DC. Fee: \$715 AMA members; \$900 nonmembers; \$275 residents and students. Info: 312-464-5102.
- April 24**      **Oncology Update for the Primary Care Provider**, sponsored by the American Cancer Society, Maryland Division, Inc., at the Hyatt Regency, Baltimore, MD. Fee: \$50. Info: Alma Hayes, 301-931-6868.
- May 8-11**      **193rd Annual Meeting of the Medical and Chirurgical Faculty of Maryland - "American Medicine Today: Perspectives from Maryland,"** at the University of Maryland, University College, Center of Adult Education, College Park, MD. 15 Cat 1 AMA/PRA credits. Fee: no charge for Med Chi members; \$225 for nonmember physicians. Info: Michael Moran, Convention Director, 1-800-492-1056 in MD, or 301-539-0872.
- May 15-17**      **Clinical Auscultation of the Heart**, sponsored by the American College of Cardiology at the Georgetown University Medical Center, Washington, DC. Info: 301-897-5400.
- May 15-19**      **43rd Annual Meeting and Scientific Session of the Maryland Academy of Family Physicians**, at the Sheraton Ocean City Resort and Conference Center, Ocean City, MD. 30.75 Cat 1 AMA/PRA credits; 30.75 AAFP prescribed hours. Fee: \$195 members; \$225 nonmembers; \$110 paramedicals. Info: Brad J. Cooper MD, 301-747-1980.

**Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.**

- April 4**      **Update on Treatment of Heart Failure**  
**April 11**      **Antibiotic Update**  
**April 18**      **Colon Cancer Update**  
**April 25**      **Psychoneuroimmunology: The New Physiology**  
**May 2**      **Breast Conservation Surgery for Carcinoma**  
**May 9**      **New Advances in Treatment of Asthma**  
**May 16**      **Functional Endoscopic Sinus Surgery**  
**May 23**      **The Complicated Coronary Artery Bypass Patient**  
**May 30**      **Latest Advances in Abdominal Radiologic Interventions**  
**June 6**      **Recent Advances and Update in Oral & Maxillofacial Surgery: Dental Implants and Orthognatic Surgery**  
**June 13**      **Mechanisms and Treatment of Head Injuries**  
**June 20**      **Update in Pediatric Orthopedic Surgery**

**American College of Emergency Physicians, 1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.**

- April 4, June 6**      **Executive Committee Meeting**  
**April 13**      **Oral Board Preparation Courses and Private Tutorials**  
**May 2, June 27**      **Board of Directors**  
**May 10**      **Annual Meeting, in conjunction with Med Chi's Annual Meeting**

**Maryland Society of Eye Physicians and Surgeons, 1211 Cathedral Street, Baltimore, MD. Info: 301-244-7320.**

- April 18**      **Executive Committee Meeting**



## THE JOHNS HOPKINS MEDICAL INSTITUTIONS

All courses at the Turner Auditorium unless otherwise indicated. For information on sponsored Continued Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

April 5-6	<b>Perspectives in Clinical Nutrition.</b> 11 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents and allied health professionals. Info: 301-955-2959.
April 8-13	<b>18th Annual Pediatric Trends.</b> 45 Cat 1 AMA/PRA credits, 45 PREP. Fee: \$575 physicians; \$425 residents and fellows. Info: 301-955-2959.
April 10-12	<b>Topics in Ambulatory Medicine V</b> at the Harbor Court Hotel, Baltimore, MD. 16 Cat 1 AMA/PRA credits. Fee: to be announced. Info: 301-955-2959
April 11-13	<b>J. Donald Woodruff Symposium on Gynecologic Oncology</b> , at the Hyatt Regency Inner Harbor, Baltimore, MD. Cat 1 AMA/PRA credits will be awarded. Fee: \$375 lectures and labs; \$300 lectures only; reduced fees for residents. Info: 301-955-2959.
April 15-17	<b>Toxicology Update '91: Concepts and Advances in Immunotoxicology.</b> Info: Catherine Walsh, 301-955-2609.
April 17	<b>Fifth Annual Mood Disorders Symposium.</b> Cat AMA/PRA credit available. Fee: \$35 DRADA members; \$45 others. Info: 301-955-2959.
April 19	<b>Thyroid Update 1991.</b> 7.5 Cat 1 AMA/PRA credits. Fee: \$150. Info: 301-955-2959.
April 25-27	<b>The Fiftieth Anniversary Meeting of the Wilmer Residents Association.</b> 22 Cat 1 AMA/PRA credits. Fee: \$200 members; \$100 retired members; \$250 nonmembers; \$200 residents/fellows. Info: Jo Ann L. Young, 301-955-2830.
April 25-27	<b>Advances in Hip and Knee Arthroplasty</b> at the Fort Magruder Inn Conference Center, Williamsburg, VA. 18 Cat 1 AMA/PRA credits. Fee: \$575 physicians; \$350 residents and fellows. Info: 301-955-2959.
May 15-19	<b>Third Baltimore Perinatal Colloquium</b> , at the Johns Hopkins University and University of Maryland School of Medicine. 24 Cat 1 AMA/PRA credits; ACOG cognates available. Fee: \$450 physicians; \$250 residents. Info: 301-955-2959.
May 16-17	<b>Pediatric Allergy and Immunology for the Practitioner.</b> AMA/PRA credits pending. Fee: \$195. Info: 301-955-2959.
June 3-14	<b>The Fourth Annual Summer Institute in Environmental Health Studies.</b> Info: Dr. Jacqueline Corn, 301-955-2609.
June 10-12	<b>Advanced Pediatric Life Support Courses.</b> 20 Cat 1 AMA/PRA credits; 20 AAP PREP credit hours. Fee: \$495. Info: 301-955-2959.
June 13-14	<b>Design and Analysis Issues in Clinical Trials.</b> 14.5 Cat 1 AMA/PRA credits. Fee: to be announced. Info: 301-955-2959.
Continuously Throughout the Year	<p><b>Visiting Preceptorship in Pediatric Critical Care Medicine.</b> Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. Info: 301-955-2959.</p> <p><b>Ophthalmic Electrophysiology Technician Training Course.</b> Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. Info: C. Kearney 301-955-2959.</p> <p><b>Ophthalmology Grand Rounds.</b> Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700.</p> <p><b>Neuro-ophthalmology Conference.</b> Held twice per month. Info: 301-955-5700.</p> <p><b>Cornea Conference.</b> Held monthly. Info: 301-955-5700.</p> <p><b>The Department of Radiology and Radiological Sciences</b> offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.</p>

**THE JOHNS HOPKINS  
MEDICAL  
INSTITUTIONS (cont.)  
Continuously  
Throughout the Year**

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169. ■



## PHYSICIAN'S RECOGNITION AWARD

### Recipients

During the month of January 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Avin, Brian Howard  
Blenko, John Walter  
Green, David

Kalman, Matthew Aaron  
Kay, Lawrence Edward  
Mahmood, Tariq

Mamodesene, Dora Marie  
Matera, Paul Anthony  
O'Connor, John J.

Scheiner, James Joseph  
Silby, Howard Michael  
Tyson, William Alva Way

Werth, Gloria Ruth

### Information for Authors

Manuscripts may be sent to Editor, **MMJ**, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

#### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

Include full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles.

Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in **MMJ** is protected by copyright and may not be reproduced without the written permission of both the principal author and **MMJ**.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.



## PHYSICIANS ANNAPOLIS—FT. MEADE

JSA Healthcare Corp. has FULL Time and PART Time positions for the following Ambulatory Care Clinic projects located in Maryland.

● **ANNAPOLIS:** NAVAL ACADEMY—FAMILY PRACTICE/Primary Care Clinic—hours are 7:30 to 4:00, Monday through Friday. BC or BE, Family Practice, General Practice, Emergency Medicine or Internal Medicine. Current BCLS/ACLS.

● **FORT MEADE:** Kimbrough Army Community Hospital—Emergency Room—BC or BE Emergency Medicine, Family Practice, General Practice, Surgery or Internal Medicine. ATLS/ACLS Flexible Hours are offered. (proposed project)

Above average compensation; Malpractice Reimbursement; Professional development funding;

Contact SUSAN BRAY—JSA HEALTHCARE CORP.—10227 Wincopin Circle—Suite 400—COLUMBIA, MD 21044.

**964-2811**

Additional opportunities are available in FLORIDA and CALIFORNIA.

JSA

JSA HEALTHCARE CORP.

An Equal Opportunity Employer

## EMERGENCY PHYSICIANS

Well established, successful, independent fee-for-service group, based in a modern suburban community hospital, seeks career-oriented emergency physicians. Part-Time. Primary responsibility for patients on "fast track" and assist full-time physicians with more acute, complex patients as needed. Bonus incentives and flexible schedule. Close to Annapolis and ocean communities. Board prepared in EM or related field. Available immediately.

Please contact and send CV to:

Walter L. Scheetz, MD, Director  
Emergency Medicine Department  
North Arundel Hospital  
301 Hospital Drive  
Glen Burnie, MD 21061  
(301) 787-4571/4572

## Speak Out on Consultation

*Consultation*, a twice-weekly radio program sponsored by the Medical and Chirurgical Faculty of Maryland allows Med Chi physicians to discuss the latest developments in medicine and to answer questions about health issues. Med Chi currently airs two sessions of Consultation weekly:

### Consultation "LIVE"

An hour-long *live* program  
Airs Sunday from 2:00 to 3:00 p.m.  
Broadcast across the country  
Call-in format: Physician answers questions from listeners

### Consultation "PRETAPED"

A half-hour *pretaped* program  
Airs Sunday at 7:30 a.m.  
Broadcast on WBAL - AM radio  
Interview format: one-on-one talk with John Stupak

Med Chi encourages all physicians to appear on these innovative programs. To register fill in the form below. Yes, I am interested in speaking on Consultation. Please contact me with scheduling information.

Name \_\_\_\_\_ Specialty \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

Return this form to: Betsy Newman, Med Chi, 1211 Cathedral Street, Baltimore, MD 21201-5585. For more information contact Betsy Newman at 301-539-0872 or in Maryland 1-800-492-1056.

**CHIEF, EMERGENCY MEDICINE**

Church Hospital is seeking candidates for CHIEF OF EMERGENCY MEDICINE. Church Hospital is a busy, not-for-profit, 216-bed medical/surgical community hospital located in Baltimore, MD. Emergency visits total over 21,000 per year. Candidates should be Board Certified in Emergency Medicine and should have significant administrative and clinical experience in an Emergency Room of comparable size. Excellent salary and benefit package. Inquiries and curriculum vitae should be sent to: Mr. William Opfer, Vice President, CHH Medical Service Corporation; 100 N. Broadway; Baltimore, MD 21231.

**PEDIATRICIAN-HAGERSTOWN**

Four pediatricians seeking BC/BE pediatrician or pediatrician/inter- nist to expand primary care office-based practice with inpatient care, nursery through adolescence. Sub-specialty training encouraged but not necessary. Practice in growing suburban area of 100,000 in Piedmont Western Maryland. Unique opportunity in modern facility with excellent salary and fringe benefits. Openings available now and summer 1991. Contact Ronald E. Keyser, 319 East Antietam St., Hagerstown, MD 21740 (301-790-3260).

**PHYSICIANS WANTED**

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

**FAMILY PRACTICE**

Two female family practice physicians desire a third to join them in an active and growing Pasadena, MD practice. Must be Board Certified. Call Carla Var- num at 255-2700.

**PHYSICIAN WANTED**

For Occupational Medicine/Per- sonal Injury in Baltimore. Excel- lent salary and benefit package. No nights. Call Barbara 301-685-7790.

**NON-INVASIVE CARDIOLOGY/INTERNAL MEDICINE PRACTICE FOR SALE**

In downtown Bethesda (Mont- gomery County). Physician is retir- ing. Space sharing arrangement in place. No HMOs. Hospital-re- lated income opportunity transfer- able as well. Contact Ann Barcome, Kohler HealthCare Consultants, Inc., 301-441-3740.

**FOR SALE - INTERNAL MEDICINE PRACTICE**

Pikesville area: modern, full fur- nished front & back offices, 3 large exam rooms, consult & x-ray rooms; patient records, files, office equipment, EKG, etc. Easy park- ing. 301-358-3370.

**MEDICAL-SURGEON'S OFFICE TO SHARE**

Pikesville: office with private con- sultation room to sublease, full- or part-time; x-ray and lab available. Parking lot; near Metro stop & public transportation. 301-484- 8066 except Tuesday.

**FOR SALE**

7000+ sq ft historic mansion on 1.4+- acres in Catonsville, perfect for professional offices and/or home (RO zoning). Needs restora- tion. Full County Approvals in place to permit construction of 21,000+ sq ft medical office build- ing. Financing available. Prin- cipals only. 301-528-0124.

**OFFICE SPACE**

Brooklyn Medical Center, approx. 500 sq ft available. Contact Shirley Dodge, 3721 Potee St., Baltimore, MD 21225 (301-355-8802).

**OFFICE SPACE**

Available for sublet in the Pikes- ville area. Morning and afternoon hours available. Please contact 484-5238.

**MEDICAL OFFICE SUITE FOR LEASE**

Osler Medical Center, Towson; near St. Joseph Hospital, GBMC, and Sheppard Pratt Hospital. Info: R.R. Kent MD, 301-323-5831 or 301-461-9922.

**OFFICE SPACE**

Pikesville-Owings Mills; Flexible hours in existing doctor's office. Exam rooms, x-ray, share secretary. Call 484-5642.

**OFFICE SPACE FOR RENT**

1,050 sq ft new office next to St. Joseph Hospital. 301-337-6800.

**FURNISHED OFFICE**

Available at Osler Medical Center, Towson. Six rooms, 800 sq ft. Call 252-2522.

**RIVA BAY OFFICE PROPERTIES, INC.**

**GRAND OPENING MARCH 1ST 1991 • CUSTOM FINISHED MEDICAL SUITES**

**A NEW concept in Medical Office Space**

**Prime, Prestigious Location - Convenient to Baltimore, Washington and Anne Arundel Medical Center**

**Turn Key Operation - Custom Medical Suites finished for medical practice use**

*Ample Free Parking; Janitorial Service Included; Receptionist, Spacious Central Waiting Area; Court Yard; Signage; Option of On-Site Radiology and On-Site Laboratory*

**40% Preleased!**

For more information and a personal tour, please call Dr. Robert Marine or Susan Best 2525 Riva Road, Annapolis, Maryland 21401 (301) 269-7992 Balt./ (301) 858-5035 Wash.



### OFFICE SPACE FOR RENT/SALE

Frederick, MD. 1021 sq ft, one block from local hospital. Available July 1, 1991. Call Dr. Charles Wright, 301-698-3301.

### COMPUTER HARDWARE

Complete set of computer hardware and printer for LifeCard electronic billings. In excellent condition, at very reasonable price. Call 301-823-3288.

### EQUIPMENT FOR SALE

Reichert SC-5 sigmoidoscope (new) \$2000; Cardiac Monitor - Q-med Monitor One (rarely used) \$4500; Microscope Binocular Reichert \$550; QBC II (hematology profiles) \$3500; Autoclave - Pelton Crane Model OCM (new) \$800; Seralyzer \$300; call 879-5306.

### FOR SALE

Kodak DT Ektachem machine. As good as new. Will sell for 50% of the price of the new. Call 301-645-5951.

## BECO ASSOCIATES

### Medical Suites Available

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550

### MMJ Classified Advertising

*Med Chi Members: \$5 per line per insertion*

*Physician Nonmembers:  
\$8 per line, minimum \$50 per ad*

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment.

Send classified ad replies or new ad copy to: *MMJ*, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

### PHYSICIANS:

M.D.'s with general medical, surgical, or Family Practice background to work as urgent care physicians in busy hospital Emergency Department. Part-time/full-time positions available. Competitive salary; flexible hours.

For details, contact: Dan K. Morhaim, M.D.  
Franklin Square Hospital Center  
9000 Franklin Square Drive  
Baltimore, MD 21237  
(301) 682-7046

## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Anne Salmon Barone, Ph.D., M.D.  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000

In the March issue of the *Maryland Medical Journal*, an error was made in the Table associated with Dr. Snow's article, "Improving Preventive Care in General Medical Practice." (Beneath the heading *Immuniza-*

*tion*, it should have read "Over 64 years of age" versus "Under 65 years of age.") A corrected Table is printed below. *MMJ* regrets the error.

## Table. Guidelines for the Periodic Health Visit for Asymptomatic, Low-risk Adults, Ages 19 and Over

Schedule: Ages 19-64, every 1-3 years; ages 65 and over, yearly or as noted.

### LEADING CAUSES OF DEATH

#### Ages 19-39

Motor vehicle accidents  
Homicide  
Suicide  
Injuries  
Heart disease

#### Ages 40-64

Heart disease  
Lung cancer  
Cerebrovascular disease  
Breast cancer  
Colorectal cancer  
Obstructive lung disease

#### Ages 65 and over

Heart disease  
Cerebrovascular disease  
Obstructive lung disease,  
pneumonia/influenza  
Lung cancer  
Colorectal cancer

### SCREENING

#### History

Dietary intake  
Physical activity  
Tobacco/alcohol/drug use

#### Over 64 years of age:

Prior symptoms of transient  
ischemic attacks (TIA)  
Functional status at home

#### Physical Exam

Height and weight  
Blood pressure

#### Over 39 years of age:

Clinical breast exam yearly

#### Over 64 years of age:

Visual acuity  
Hearing and hearing aids

#### Laboratory/Diagnostic Procedures

Non-fasting total blood cholesterol

#### Under 65 years of age:

Pap smear every 1-3 years

#### Ages 50-75:

Mammogram every 1-2 years

#### Over 64 years of age:

Dipstick urinalysis  
Thyroid function test (women)

### COUNSELING

#### Diet and Exercise

Fat  
Caloric balance  
Selection of exercise program

#### Injury Prevention

Safety belts  
Smoke detectors  
Smoking near bedding or upholstery

#### Dental Health

Regular dental visits,  
toothbrushing, flossing

#### Substance Use

Tobacco  
Alcohol and other drugs

#### Young males:

Violent behavior  
Firearms

#### Other

Over 64: Glaucoma testing  
by eye specialist

#### Sexual Practices (under 65)

Sexually transmitted disease  
Unintended pregnancy/  
contraception

#### Over 64 years of age:

Fall prevention  
Hot water heater temperature

### IMMUNIZATION

Tetanus-diphtheria (TD) booster  
every ten years

#### Over 64 years of age:

Influenza vaccine yearly  
Pneumococcal vaccine (one time)

(Adapted from the U.S. Preventive Services Task Force)



# Join us in a new kind of partnership ... uniting doctors, lawyers, teachers, parents, and youth against drug and alcohol abuse.

Become part of the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the



war against drugs. Become part of a unique initiative in Maryland to bring doctor/lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations Department  
at 301-539-0872, 1-800-492-1056.**

Doctor/Lawyer/Teacher Partnership Against Drugs

# MALPRACTICE INSURANCE



## CHECK!

- Whether you have
- ☐ the right policy
  - ☐ the right premium
  - ☐ the right coverage

You may have a great policy, but it doesn't mean that it will be the best and most fitting to your present & future needs.

*If you have not checked all the boxes above, call us today.*

---

## ONAL'S INSURANCE AGENCY

*Complete Insurance Services*

---

For more information, contact  
Korky Onal

**Telephone: (301) 859-1990 • FAX: (301) 684-3212**



518 S. Camp Meade Road, Suite 4 • Linthicum, Maryland 21090



# DIAGNOSTIC ASSAY SERVICES



## **Specialties include:**

*Fertility Testing*

*Esoteric Steroid & Endocrine Testing*

*Infectious Disease Testing*

*Complete Allergy Testing*

**9290 Gaither Road  
Gaithersburg, MD 20877**

**D.C. Area 840-9220  
Toll Free - Nationwide - 800-638-4000**

# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*

576040  
95



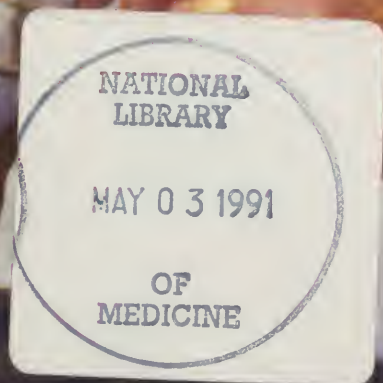
# MMJ

Maryland Medical Journal

MAY 1991

W1 MA76M  
NO. 5 1991  
SLO: SP0054434  
1: MARYLAND MEDICAL JOURNAL

3  
NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA MD 20894



J. David Nagel MD  
Med Chi's President 1991-1992

Endorsed by Med Chi  
for Maryland Physicians

©1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.

# Our Members Are Not Dying For A Free Tail.

Strangely enough, some companies are trying to sell Maryland physicians a professional liability policy that requires them to die or become permanently disabled in order to get a free tail. At Medical Mutual, our members can get a free tail while they are very much alive.

We make the tail available at no extra cost for those of you who are planning to retire from the practice of medicine after five consecutive years on our claims made and/or occurrence policy. If retirement is not in your plans, our tail is free at any age after 15 consecutive years on our claims made policy. As an added feature, you may step down from a higher rated specialty to a lower rated one with no tail charge for making the change.

Your broker or our Member Services Representatives can answer your questions about tail provisions for Medical Mutual members.

Of course, we also give a free tail in the event of your permanent disability or death.

We just don't think this should be your only choice.



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*

# MetPath



*"Your Partner in Practice"*

## Quality

- Quality assurance program directed by our full time QA manager and our technical director.
- Control samples of up to 10% of our work load.
- Outside proficiency program results, available to you by request.

## Service

- Courteous client service, 24 hours a day.
- Flexible specimen pick-up schedules.
- Customized requisitions.
- Specialized report formats.

## Convenience

- Comprehensive testing.
- 4 STAT labs.
- 27 Patient Service Centers.
- House call service in the Baltimore/Washington area.

**Regional Headquarters**  
1550 East Gude Drive  
Rockville, MD 20850  
(301)340-9800  
1(800)722-7393

**Baltimore**  
1246 East Joppa Road  
Baltimore, MD 21204  
(301)583-1500  
1(800)426-1676

Lab tours are welcome! Call Sales for an appointment.

a **CORNING** Clinical Laboratory



# MMJ

## Maryland Medical Journal

MAY 1991

VOLUME 40 NO 5

### ARTICLES

- J. David Nagel MD, Med Chi President 1991-1992 . . . . . 353**

*Betsy Newman*

"I think it's a privilege to be a physician. I don't know of anything else in this world I'd rather do."

- Large Valvular Vegetations in Infective Endocarditis . . . . . 361**

*Robert Dart MD and Wilson Gomer MD*

Patients with vegetations demonstrable by echocardiography tend to have more complications and a worse prognosis than patients without echo-demonstrated vegetations.

- Rocky Mountain Spotted Fever: Often a Diagnostic Dilemma . . . . . 367**

*Christopher deBorja MD and Victor R. Hrehorovich MD*

Prompt treatment with tetracycline or chloramphenicol is the single most important therapeutic intervention in patients diagnosed with Rocky Mountain spotted fever.

- Rhabdomyolysis and Acute Renal Failure: A Review of Two Cases . . . . . 373**

*Marian Benner MD and Daniel Rossler MD*

A possible complication of renal failure induced by rhabdomyolysis should be recognized in patients presenting with injuries involving muscle damage.

- Correlation of Holter Monitoring and Left Ventricular Function to Signal-averaged Electrocardiogram after Myocardial Infarction . . . . . 375**

*Jorge Perez-Alard MD, Pankaj R. Desai MD, Ramanathe Sirithara MD, and Chris Papadopoulos MD*

Holter monitoring, in combination with estimates of left ventricular function, helps to identify subgroups of patients in the immediate post-myocardial infarction period in whom late potentials may be present on signal-averaged ECG.

- Retrieval and Unknotting of Inadvertently Placed Intravascular Catheters . . . . . 381**

*Diran R. Bezirdjian MD*

Percutaneous transcatheter retrieval is a safe and reliable method which makes an operative procedure unnecessary and helps avert potentially fatal complications.

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

### Advisory Member

Carmine M. Valente PhD

### Art Director

Virginia Carter

### Graphic Artist

Valentia McVey

### Communications Assistant

Lori Robinson

### Executive Director

Angelo J. Troisi FACHE

Communications Director

Michelle Burke MHSA

Maryland Advertising  
Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

Copyright© 1991. MMJ Vol 40, No 5. The *Maryland Medical Journal* USPS 332080. ISSN 0025-4363 is published monthly by the Medical and Chirurgical Faculty of Maryland and is a membership benefit. Subscription rates: U.S. and U.S. possessions, one year: nonmembers \$35; foreign \$42. Single copy: members \$5; nonmembers \$7. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: send address changes to *Maryland Medical Journal*. 1211 Cathedral St., Baltimore, MD 21201-5585. FAX 301-547-0915.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

## DEPARTMENTS

<b>Epidemiology and Disease Control Program . . .</b>	<b>331</b>
<i>Tuberculosis Control . . .</i>	
<b>Executive Director's Newsletter . . . . .</b>	<b>341</b>
<b>Component Society Presidents . . . . .</b>	<b>385</b>
<b>A Clinical Moment with . . . Diabetes . . . . .</b>	<b>391</b>
<i>The Management of Early Morning Hyperglycemia . . .</i>	
<b>Quality Practice Digest . . . . .</b>	<b>395</b>
<i>Patient Self-Determination Act . . .</i>	
<b>Board of Physician Quality Assurance Actions . .</b>	<b>397</b>
<b>Maryland Oncology Newsletter . . . . .</b>	<b>405</b>
<i>Cancer Immunotherapy: Basic and Early Clinical Trials . . .</i>	

## MISCELLANY

<b>Letters to the Editor . . . . .</b>	<b>336</b>
<i>Congratulations, The Patient's Advocate, Specialty Status. . .</i>	
<b>Letter to the President . . . . .</b>	<b>337</b>
<i>Springfield Hospital Center . . .</i>	
<b>Abortion Law . . . . .</b>	<b>347</b>
<i>Senate Bill No. 162 . . .</i>	
<b>Annual Meeting . . . . .</b>	<b>392</b>
<b>Word Rounds . . . . .</b>	<b>407</b>
<i>A Medical Lexicon from Mythology. . .</i>	
<b>Members in the News . . . . .</b>	<b>409</b>
<i>Howard A. Zacur MD, Paul N. Manson MD . . .</i>	
<b>Physician's Recognition Award . . . . .</b>	<b>409</b>
<b>Medical Miscellany . . . . .</b>	<b>411</b>
<i>Physician Payment Reform, Suburban Hospital Hosts Russian Medical Students, Med Chi's 1991 Legislative Rally . . .</i>	
<b>Doctors Note . . . . .</b>	<b>415</b>
<b>Information for Authors . . . . .</b>	<b>415</b>
<b>Book Review . . . . .</b>	<b>419</b>
<i>Transformations in American Medicine . . .</i>	
<b>Classified Ads . . . . .</b>	<b>420</b>

Cover photo and design by Virginia Carter.



# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.



*Lumbar Spine*

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)



**SmithKline Beecham**  
*Clinical Laboratories*

# What's new in the clinical laboratory business?

SmithKline Beecham Clinical Laboratories has opened a 40,000 sq. ft. laboratory to support the Baltimore/Washington medical community in

**Owings Mills, Maryland.**



**SmithKline Beecham**  
*Clinical Laboratories*

11425 Cronhill Drive  
Owings Mills, MD 21117

(301) 581-2400

*Tell Me  
More About  
SmithKline  
Beecham's  
New Laboratory  
in  
Owings Mills,  
Maryland*

☐ I am interested in a FREE special introductory offer.

☐ Please provide me with more information on SBCL services and how they can meet my laboratory testing needs.

☐ I would like to talk to a SBCL representative.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ St. \_\_\_\_\_ Zip \_\_\_\_\_

Telephone Number \_\_\_\_\_





# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

May 1991

## DEPARTMENT OF HEALTH AND MENTAL HYGIENE GUIDELINES FOR TUBERCULOSIS CONTROL

### I. INTRODUCTION:

The following are minimum recommendations for the State of Maryland. A Health Officer or Medical Director of an institution may establish more stringent guidelines for defined subpopulations. There are ample data to indicate that the following regimens are safe, effective, cost efficient and improve patient compliance.

All patients with tuberculosis should be offered HIV testing and counseling. Any high risk or suspected HIV infected patient who declines serologic testing should be treated for tuberculosis as if he/she were HIV positive. This will ensure an efficacious regimen.

### II. TREATMENT OF TUBERCULOSIS

#### A. Recommended regimen in adults (see special considerations below).

Strictly supervised chemotherapy with:

Isoniazid (INH) 5-10 mg/kg up to 300 mg p.o. daily  
and

Rifampin (RMP) 10 mg/kg up to 600 mg p.o. daily  
and

Pyrazinamide (PZA) 15-30 mg/kg up to 2 gm p.o. daily

These three drugs should be given for eight weeks; this "induction" phase is then followed by four months of supervised therapy with:

#### TWICE WEEKLY

INH - 15 mg/kg p.o. (for individuals weighing > 120 percent of ideal weight use ideal body weight estimates to calculate dosage up to maximum of 900 mg p.o.)

#### OR

#### DAILY

INH - 5-10 mg/kg up to 300 mg p.o.

#### and

RMP -- 10 mg/kg up to 600 mg p.o.

#### and

RMP-10 mg/kg up to 600 mg p.o.

Six month treatment regimens are not appropriate for persons with HIV infection. (see section B.5)

### B. Special Considerations

#### 1. Drug resistance:

If resistance to INH or rifampin is suspected (for example, because of a history of inadequate treatment, exposure to drug-resistant tuberculosis or-

ganisms, or the patient comes from an area of the world where drug resistant tuberculosis is prevalent, etc.) this therapeutic regimen should be modified. The above treatment regimen should be supplemented with streptomycin (SM, the drug of first choice, because of its bacteriocidal properties) or ethambutol (EMB, as the drug of second choice, be-

cause of its bacteriostatic properties) with therapy started under strict supervision, i.e., the direct observation of or administration of medications. If INH or RMP resistant organisms are confirmed on culture, treatment is continued with an appropriate multi-drug ( $\geq 3$  drugs) regimen for a minimum of 9 to 12 months and at least 6 months after documented culture conversion to negative. Never add one drug to a failing regimen.

## 2. Extrapulmonary disease:

Extrapulmonary disease should be treated with the same regimens recommended for pulmonary disease.

## 3. Tuberculosis in children:

INH	10-20 mg/kg up to 300 mg p.o. daily
RMP	10-20 mg/kg up to 600 mg p.o. daily
PZA	25-30 mg/kg up to 2 gm p.o. daily

INH, RMP, and PZA daily for eight weeks followed by INH and RMP daily or twice weekly for four months. The twice weekly dosage of RMP remains the same. When given in a twice weekly schedule, the dosage of INH increases to 20 to 40 mg/kg up to maximum of 900mg.

## 4. Tuberculosis in pregnancy:

Tuberculosis disease diagnosed during pregnancy should be treated without delay.

Recommended regimen:

INH	5-10mg/kg up to 300 mg p.o. daily
RMP	10 mg/kg up to 600 mg p.o. daily
Ethambutol (EMB)	15 mg/kg (pre- pregnancy weight) daily

These 3 drugs are to be given for eight weeks followed by INH and RMP daily for seven months. SM, PZA, and ethionamide should be avoided during pregnancy because of potential toxic effects on the fetus. Pyridoxine 25 to 50/mg/day should be given concurrently when INH is given to a pregnant woman.

## 5. Tuberculosis in HIV Infected Patients:

For patients with HIV infection and tuberculosis, at least nine months and preferably 12 months of chemotherapy are recommended. Therapy should continue at least six months after cultures have become negative.

All AFB smear or undifferentiated culture positive HIV infected patients should be considered to have active M. tuberculosis infection. Appropriate antituberculosis therapy with supervision, should be instituted immediately. If the final culture turns out to be an atypical mycobacterial organism, then therapy will need to be adjusted or terminated.

## 6. Hepatic disease

"Mild dysfunction (e.g. alcoholism) does not necessarily influence the choice of drugs; however,

monitoring of hepatic function is important. Elevations in the concentration of serum glutamic-oxaloacetic transaminase (SGOT or AST) or serum glutamic-pyruvic transaminase (SGPT or ALT) to three to five times normal should lead to a reassessment of the situation. Regimens may be continued, stopped, interrupted, or changed as a result of this assessment." (Chest 87, (1985) Supplement)

## C. Sputum Examination

At least three sputum specimens should be collected at least 24 hours apart before any drug regimen is initiated. In some cases when clinically warranted, the patient may be started on treatment and sputum specimens obtained during the first week of therapy. Drug sensitivities should be obtained on initial sputum specimens sent for culture but should not be ordered on subsequent specimens; should be "deep cough" sputum, not saliva, and of a quantity equal to at least 5 ml. Sputum induction may be necessary to obtain a specimen of sufficient quality and quantity.

Sputum specimens should be collected monthly until cultures are no longer positive. Positive culture results after three months of chemotherapy suggest the possibility of treatment failure due to drug resistance or to noncompliance. Under these circumstances, the following are recommended:

1. Never add only one drug to a failing regimen.
2. Order repeat drug susceptibility studies.
3. Add or substitute at least two new drugs to which the organisms are known to be sensitive.
4. Monitor by sputum smear and culture on a monthly basis.
5. Institute DIRECTLY OBSERVED THERAPY (assistance available from local health departments)

## D. X-ray Examination

1. All persons being evaluated for possible tuberculosis should have an initial chest x-ray.
2. The physician may obtain a chest x-ray at the end of the course of therapy.

Routine, periodic x-ray examinations during the course of treatment are not recommended.

The following are the statements of the U.S. Public Health Service regarding x-ray examinations during and following tuberculosis treatment:

### "Routine Follow-up of Tuberculosis Patients Who Have Completed Treatment"

Repeated Chest x-ray examinations of symptomatic tuberculosis patients who have completed treatment have been shown to be of insuffi-



cient clinical value or productivity to justify their continued use.

### **Routine Periodic Chest X-Ray Examinations During Tuberculosis Treatment**

Radiographic stability does not necessarily indicate success or failure of chemotherapy as reliably as the results of sputum smear and culture, and assessment of symptoms and clinical status. However, an occasional x-ray examination may have value in confirming bacteriologic and clinical findings and enhancing patient compliance."

3. Periodic x-rays may have clinical usefulness in monitoring response to treatment in tuberculosis cases who were smear and culture negative prior to treatment

### **E. Monitoring for side effects of medications**

1. Obtain pretreatment baseline studies as follows:

a. In patients suspected of having hepatic disease, renal disease or gout, obtain liver function test results, creatinine, or uric acid respectively.

b. In patients receiving streptomycin, obtain baseline audiogram.

c. In patients receiving ethambutol, obtain baseline visual acuity and red/green color discrimination.

2. In each of the above circumstances, the patient should be monitored with repeat studies on a monthly basis.

3. In all other cases, laboratory studies should be obtained any time signs or symptoms suggesting adverse drug reactions are present.

4. Treatment of active tuberculosis should not be delayed while awaiting results of baseline monitoring studies.

### **F. Reporting Cases**

Physicians and other health care providers are required to report suspected and confirmed cases of tuberculosis and mycobacteria other than tuberculosis (MOTT) to the local health officer (COMAR 10.06.01). Physicians caring for persons with tuberculosis will be requested to complete periodic status reports on these cases to assure that all cases become non-communicable as quickly as possible. Consultation on the management of tuberculosis is available from local health departments and from the Division of Tuberculosis Control, Maryland Department of Health and Mental Hygiene (301) 225-6698.

### **G. Diagnosis**

Persons with suspected tuberculosis should be referred for an appropriate examination which should normally include: a Mantoux tuberculin test; a chest x-ray; a bacteriologic exam; and a physical exam.

## **1. Signs and Symptoms**

- It is important to obtain a complete history (including a history of exposure to tuberculosis) and perform a thorough physical examination for persons with suspected tuberculosis.
- Pulmonary tuberculosis should be suspected in persons with a productive, prolonged cough (over 2 weeks duration) which progressively worsens. Other symptoms of tuberculosis include fever, chills, night sweats, easy fatigability, loss of appetite, weight loss and hemoptysis (coughing up blood).
- About 15 percent of tuberculosis cases present with disease at an extrapulmonary site as the major site of involvement. Symptoms of extrapulmonary tuberculosis vary depending upon the site affected, but tuberculosis should be considered as a differential diagnosis in ill persons who are at higher risk for tuberculosis (e.g., those with a recent history of exposure, recent tuberculin skin test conversion, immigration from a country with a high prevalence of tuberculosis, immunosuppressed patients, the elderly, minorities, [including Blacks and Native Americans], the homeless, other persons from lower socioeconomic groups, etc.).

## **2. Demonstration of Mycobacteria**

### **a. Specimen Collection**

- Persons with suspected pulmonary or laryngeal tuberculosis should have at least 3 sputum specimens examined by smear and culture. It is desirable that the first specimen be obtained under supervision. A series of 3 early morning specimens collected on successive days is desirable. If the acid-fast smears from these 3 specimens are negative, 3 additional specimens should be collected.
- To produce good sputum specimens, patients need to know the reason for testing. Patients should be informed that the material brought up from the lungs after a productive cough is sputum. Nasopharyngeal secretions and saliva are not sputum.
- For patients unable to raise sputum, aerosol induction can be used to stimulate the production of sputum. Patients should be instructed to take several normal breaths of the aerosol mist, inhale deeply, cough with force (while covering their noses and mouths with tissues to avoid contaminating the air), and then expectorate into the specimen container. They should be given time - 15 minutes is usually sufficient - to produce sputum, which in most cases is brought up by

a deep cough. Because the induced sputum is very "watery" and resembles saliva, it should be labeled "induced" to ensure that the laboratory staff do not discard it.

- The cough induced by aerosol induction method is often violent and uncontrolled. Therefore, to protect health care personnel, collection rooms should have some means of air control, such as induction booths equipped with exhaust fans, or portable hoods with HEPA (high efficiency particulate air) filters, ultraviolet light, or a combination of both. Detailed infection control measures may be found in "Guidelines for Preventing Tuberculosis" MMWR Vol. 39, No RR-17 December 7, 1990.
- Coaching each patient individually on how to expectorate can facilitate sputum collection. Patients are seldom successful in providing an adequate specimen if they are left alone. Coaching is especially necessary in the collection of the first specimen. The amount of nursing support required on subsequent visits will depend on individual patient needs.
- Gastric aspiration can also be used to obtain swallowed sputum specimens, and may be necessary to obtain specimens from young children.
- Bronchoscopy should only be done if the patient cannot produce a sputum specimen and there is reasonable doubt about the diagnosis of tuberculosis. Bronchial washings, brushings, and biopsy specimens may be obtained depending upon the differential diagnostic possibilities and the observed findings. Sputum collected after bronchoscopy may also prove to be diagnostically useful.
- Because tuberculosis can occur in almost any anatomical site, a variety of clinical specimens other than sputum may be submitted for examination when nonpulmonary mycobacterial disease is suspected (e.g., urine, cerebrospinal fluid, pleural fluid, pus, biopsy specimens, etc.). Tissue specimens should be placed in saline solution and not be placed in formalin.

#### b. Laboratory Examination

- Detection of acid-fast bacilli in stained smears examined microscopically may provide the first bacteriologic clue of tuberculosis. It is an easy and quick procedure which permits the presumptive diagnosis of tuberculosis.
- Health care providers wishing to submit specimens to the Mycobacteriology Laboratory of the Maryland Department of

Health and Mental Hygiene may obtain collection kits through the local health department. Use only the container furnished by the State Health Department as these are carefully constructed in accordance with postal regulations. Specimens should reach the laboratory not later than 24 hours after being taken. Specimens may be submitted via mail or through the local health department. Contact your local health department for instructions.

- Follow-up sputum examination for initially positive patients is the most important way to judge infectiousness and to monitor response to therapy. At a minimum, specimens should be obtained at monthly intervals until the patient converts to negative.
- Culture examination is essential to confirm the diagnosis of tuberculosis by growth of *M. tuberculosis*. It normally takes 3 to 6 weeks for culture results to be reported, although some laboratories are now doing radiometric testing which provides results in as little as 10 days.
- When sputum is sent to the Maryland Department of Health and Mental Hygiene Mycobacteriology Laboratory, initial reports of positive smears or cultures, or emergence of drug resistance, are reported by telephone to the health department (and the medical care provider if different from health department). Follow-up results are reported by mail.
- Studies of drug susceptibility on initial isolates are recommended for all patients but are required for patients with an increased risk of drug resistance (e.g., foreign-born persons from areas with high rates of resistance, persons with a history of previous treatment with antituberculosis drugs, cases with positive bacteriology after 3 months of therapy, contacts of drug resistant cases).

#### 3. Radiographic Examinations

- A posterior-anterior view of the chest is the standard radiograph needed for detection and description of chest abnormalities. In some cases, other views (e.g., lateral, lordotic) may be necessary.
- With tuberculosis, chest abnormalities usually occur in the apical and posterior segments of the upper lobe or in the superior segments of the lower lobe. However, lesions may appear anywhere in the lungs and vary in size, shape, density, and cavitation. Abnormalities on chest radiographs are suggestive of, but not diagnostic for, tuberculosis.

References available upon request



# Talk to us. (If you talk enough the dictation equipment is free!)

- Solves staffing, space and reliability problems.
- 3600 lines a day qualifies for free equipment.
- Fast turn-around, including 3-hour STAT service.
- Printout in your office, instant revisions.

If your practice generates 3600 lines a day or more, you qualify for a complete digital dictating system without charge. Favorable arrangements are also available with smaller volumes.

Then, transcriptions are as easy as picking up your phone and dictating directly to our high-security digital recording system. Expert medical transcriptionists enter your notes into our data banks for backup, return transmission and printout. At the same

time, you'll also be building a data base for easier conversion to electronic record keeping.

Transcriptions International's electronic system is today's answer for physicians, hospitals, clinics, HMOs, group practices, rehab centers, law firms or any business needing quick, accurate and economical transcriptions.

Call today for a no obligation proposal and talk to us about your dictation needs.

**For more details, call 1-(800)-348-4326.**



**TRANSCRIPTIONS**  
INTERNATIONAL, INC.

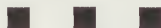
703 Giddings Avenue, Annapolis, MD 21401. (301) 280-6205

**MMJ Receives Congratulations**

I would like to congratulate the *Journal* for its March 1991 issue on Maryland Medicine. I particularly enjoyed the history of the Department of Medicine by Dr. Woodward and his colleagues. That Department certainly reflects the best in medical education in this country.

I was particularly struck to learn that the first chairman was a student of Dr. Benjamin Rush (1746 to 1813), who was one of the four physicians to sign our Declaration of Independence when he was only thirty years old and was considered the Father of American Psychiatry. His textbook, *Medical Inquiries and Observations Upon the Diseases of the Mind*, was the first published on this topic in the western hemisphere, went through numerous editions and, according to Barton, was the dominant book on the subject for nearly seventy years. The influence that he had on so many of his students like Dr. Potter is still being reflected. The article notes the continuing priority that the Department of Medicine and the University of Maryland places on training in Psychiatry for the residents.

STUART L. KEILL MD  
Professor of Psychiatry  
University of Maryland

**The Patient's Advocate: A Response**

I have read your [Barton Gershen MD] editorial that appeared in the *Maryland Medical Journal* [February 1991]. All I can say is "Bravo!" Enclosed is a sampling of correspondence\* that I have had with the State Insurance Commissioner and with Traveler's Insurance Company.

Although my letters may not have been as eloquent as your editorial, my feelings, I think, were the same. I have objected to the use of the term "patient advocate," as it implies that the patient requires protection from some entity. It certainly does nothing to enhance the physician/patient relationship that must be assumed to be an adversarial one if a patient advocate is needed.

As you can see from the enclosed correspondence,\* the Insurance Commissioner has asked them to alter their form letter. Unfortunately, the Traveler's Company has ignored this directive. I have decided to avoid wasting more of my time trying to get the Traveler's

Company to change their way by writing to them or the Insurance Commissioner but have decided to write to the patients directly. Enclosed is a copy of the letter\* that I anticipate using. Perhaps if the people who pay their salaries expose them for what they really are, and that is, of course, insurance company advocates or utilization review coordinators, I would not be so disturbed by this practice.

Thanks for your editorial. I am glad that I am not alone. As you can see from one of the Traveler's responses, they took the position that since there were no other complaints that there was no problem. Nothing could be further from the truth.

STEVEN J. BRAND MD  
Frederick

\* Correspondence is available in the MMJ office.

**Specialty Status**

Legal counsel for Med Chi states clearly and succinctly that a difference does not exist between a physician who has been certified by one of the American Boards and one who has merely "fulfilled the requirements to attain eligibility to take the examinations."<sup>1,2</sup> Many of the individuals in the latter group may have failed to pass the examinations, either once or more times. Continued board eligibility status does not exist and is not recognized by the Boards.

This decision in the Code of Maryland Regulations is directly at odds with the thoughts of the Specialty Boards and in opposition to the promotion of quality assurance. In surgery, for example, the *Accreditation Manual for Hospitals* specifically states that specialty board certification is an excellent benchmark for the granting of surgical privileges. The reason for the Maryland decision to have two classes of specialists is not clear.

**References**

1. Buckingham SC. Commentary: Medical Advertising. *Md Med J* 1991; 40:137.
2. COMAR 10.32.09.06A(1).
3. Joint Commission on Accreditation of Healthcare Organizations. *Accreditation Manual for Hospitals*. Medical Staff (MS) 4.2.8.3.2, 112.

JOSEPH M. MILLER MD  
Baltimore





February 6, 1991  
 Springfield Hospital Center  
 Sykesville, MD 21784

Reynaldo L. Lee-Llacer MD, President  
 Med Chi Faculty of Maryland  
 1211 Cathedral Street  
 Baltimore, Maryland 21201

Dear Dr. Lee-Llacer:

On behalf of the Springfield Hospital Center Medical and Dental Staff, I wish to express appreciation for the ongoing support and assistance you have provided us over the last year and a half. Subsequent to the hospital administration's unilateral replacement of our Medical Staff Bylaws with an administratively loaded Medical Staff pseudo-organization (counter to the Joint Commission for the Accreditation of Health Care Organization's (JCAHO's) Guidelines), Med Chi has steadily been there for us.

Despite the fact that the hospital administration refused to allow Med Chi to negotiate differences between the Medical Staff and hospital administration, Med Chi not only offered its services in an attempt to resolve this painful and destructive impasse, but even sent a delegation of members from the Eastern Shore to investigate the problems; this committee drove many miles on snowy roads to meet with us until late one evening.

When it became apparent that legal measures were going to be required to allow the Medical Staff to return to its rightful functioning, Med Chi filed an *amicus curiae* brief in favor of the Medical Staff and requested that the American Medical Association do likewise -- which it did.

Subsequently, when the confusion (or whatever) led to a Joint Commission Survey Team not being made aware of the Medical Staff's lawsuit against the administration and the multiplicity of problems produced by this schism, Med Chi was again the staunch supporter and advocate for the Medical Staff. Your organization was in contact with JCAHO in an attempt to provide information, and Med Chi further enlisted the aid of the American Medical Association. Essentially as a result of your efforts, JCAHO is again returning to this hospital to conduct a focused survey to primarily consider Medical Staff Bylaws and Medical Staff functioning.

In essence, Med Chi has in every way been a strong, dependable, consistent advocate of our Medical Staff and, therefore, of quality patient care in our institution. It is my opinion that we are indeed fortunate to have such a State Medical Society and I wish that all Medical Staffs throughout our fair State of Maryland could know how much we and all physicians have benefitted from your organization.

In sincere appreciation,

Yours truly,



Ellis F. McClelland MD, Elected President  
 Medical Dental Staff  
 Springfield Hospital Center



---

11425 CRONHILL DRIVE    OWINGS MILLS, MARYLAND    21117    (301) 581-7076

# BALTIMORE B<sup>IO</sup>MEDICAL LABORATORIES

Forty-eight hour turn around time  
for in house testing.



Cytotechnologists have at least  
eight years experience and  
are graduates of an approved  
cytotechnology school.




Continuing educational studies  
required of all technicians.



Experience with over sixty thousand  
GYN cases per year in the  
Baltimore Metropolitan area.

Specializing in Cytology and Histology

---





### **TAX-DEFERRED ANNUITIES\***

- *Competitive rates of interest*
- *Tax-deferred interest until withdrawn*
- *Safety of investments*
- *Access to income*
- *Rate guarantees for 1-3-5 years*

**CALL TODAY!**

### **You Need More Security Than Social Security...**



#### **INVESTMENTS OFFERED AT REISTERSTOWN FEDERAL SAVINGS BANK**

**Through Time Financial Services, Inc.**

CALL KATHY WALDER or  
LAURA WORM  
at 833-2693, EXT. 221 or 220

### **LONG-TERM HEALTH CARE\***

- *Flexible coverage*
- *Guaranteed renewable*
- *Inflation protection available*
- *Lifetime benefit options*
- *Protection for Alzheimer's disease*





**CALL TODAY!**

\* Contracts are protected by the legal reserves of the issuing insurance company and are not FDIC insured.



## **PHYSICAL THERAPY**

Specializing in treatment for pain of the neck and back.

-  Prompt scheduling for your patients
-  Narrative reports sent to each referring physician
-  State-of-the-art facility, featuring isokinetic evaluation and exercise equipment
-  Therapy provided as prescribed

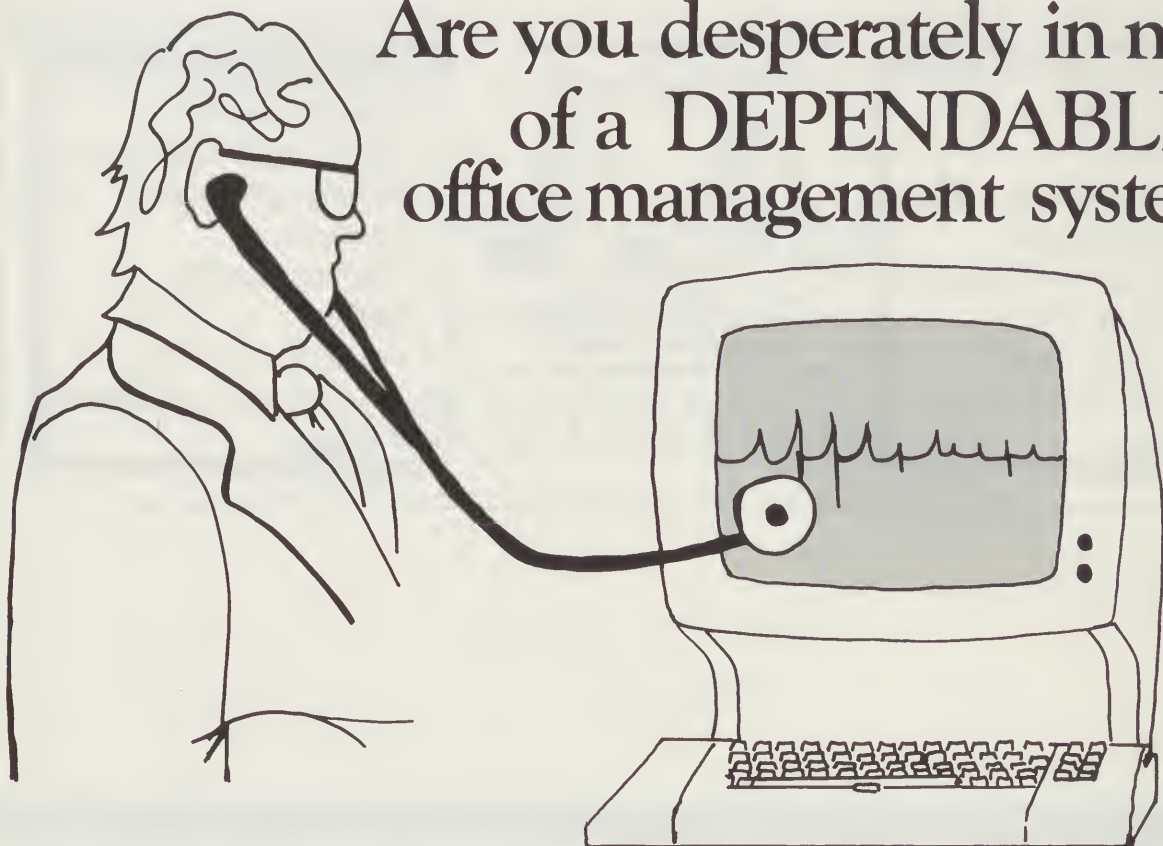
We welcome the opportunity to serve your patients

## **PYRAMID HEALTH SERVICES, INC.**

Robert J. Varley, P.T.

1001 North Point Boulevard • Baltimore, MD • 301-282-9259

Are you desperately in need  
of a **DEPENDABLE**  
office management system?



## Turn to The Medical Manager®— more than 10,000 in use, nationwide.

Many medical practices have had the unfortunate experience of going with an office computer system that had no "follow up." When you took two aspirin and called them in the morning, they weren't there.

That's why more and more doctors are switching to the No. 1 selling software for medical practice management in the country—The Medical Manager.® As the nation's second largest dealer, we have more Medical Management systems in operation in the mid-Atlantic states than any other dealer.

It's possible that our new system, customized for your particular practice, will cost less than updates you need for your old system. In some cases you can

use the hardware you have, since The Medical Manager® runs on most micro computers.

After we install The Medical Manager® system, we train your staff, and continue to provide on-going support *every time* you call!

Please tell us about your system and your needs. We'll give you a **FREE ESTIMATE** on converting your system. Yes, we make office calls!

**CALL TOLL FREE**  
**1-(800) 776-2454**

or contact your nearest PRISM office

**P<sup>△</sup>R<sup>△</sup>I<sup>△</sup>S<sup>△</sup>M**  
MEDICAL SYSTEMS

Fairfax  
(703) 359-0777

Winchester  
(703) 662-4545

Richmond  
(804) 330-9225

Baltimore  
(301) 494-0992



# Executive Director's Newsletter

May 1991

## 1991 Annual Meeting

Med Chi's 1991 Annual Meeting will be held Wednesday, May 8 thru Friday, May 10 at the University of Maryland Center of Adult Education in College Park, MD.

This year's meeting features several special guest speakers including:

- C. John Tupper MD, President of the American Medical Association;
- Mrs. Marilyn Quayle\*;
- Mrs. Elizabeth Dole, President of the American Red Cross\*;
- The Honorable Melvin A. Steinberg, Lieutenant Governor of Maryland;
- The Honorable Steny H. Hoyer, U.S. Representative (D, MD);
- The Honorable Parris Glendening, County Executive, Prince George's County; and
- The Reverend Joseph A. Sellinger, President of Loyola College in Maryland.

*\*Invited to the meeting*

Scientific sessions for this year's meeting include *Recent Advances in Cardiology; Random Drug Testing of Physicians; Management of Acute Headaches; Primary Care of the HIV-Positive Patient; Cholesterol in Children; Current Treatment of Anxiety and Insomnia; and Changes in Medicare Reimbursement.*

Entertainment for this year's meeting includes a performance by the Capitol Steps, a political cabaret troupe from Washington, on Wednesday May 8th. A celebrity golf tournament will be held Thursday May 9th and will feature PGA pros, Fuzzy Zoeller, Nathaniel Crosby and Skeeter Heath. There will also be a presidential banquet honoring Reynaldo L. Lee-Llacer MD on Friday, May 10th.

For more information on the Annual Meeting, call Michael Moran at 301-539-0872 or 1-800-492-1056.

### *Directions to the Med Chi Annual Meeting at the University of Maryland Center of Adult Education*

The University of Maryland Center of Adult Education is located on the western edge of the University of Maryland College Park Campus at the intersection of University Boulevard (MD Route 193), Adelphi Road and Campus Drive. From I-495 (capital beltway), take exit 25 B to U.S. Route 1 South, then turn west (yield right) on MD Route 193. The Center of Adult Education will be visible on your left at the third traffic light on University Boulevard.

## Physicians in the Persian Gulf

Last month, Med Chi printed the names of several physicians who have been called to action because of "Operation Desert Storm." Since that printing, Med Chi has received names of several other physicians who have been called to duty:

Arturo E. Betancourt MD  
Lutgardo G. Panlilio MD  
Carol S. Ramsey MD

Robert S. Berger MD  
Nelson J. Realo MD

Med Chi would like to recognize these physicians for their dedicated service to our nation and wish all of America's Armed Forces a happy and safe homecoming.

If you know of a colleague who has been called to serve, please contact Betsy Newman in Med Chi's Public Relations Department at 301-539-0872 or 1-800-492-1056.

---

## *Med Chi Offers Assistance to VA Hospitals*

---

In a recent letter to the Veteran's Administration (VA), Med Chi offered to recruit volunteer physicians to augment VA Hospital staff who might be treating casualties from the war in the Persian Gulf. "We are grateful for your willingness to assist our medical center," wrote Veteran's Administration Medical Director, Barbara Gallagher, in response to Med Chi's proposal. "Due to the current cease fire in place in the Persian Gulf, we do not anticipate receiving any combat casualties at the Baltimore VA Medical Center. Thank you again for your offer of assistance to help us in meeting the needs of our Armed Forces personnel."

---

## *CHAMPUS Providers May Not Waive Patient Cost-Share*

---

Health care providers who routinely waive a patient's cost-share or advertise that they will waive cost-shares for certain beneficiaries are in violation of CHAMPUS laws and regulations, and may be investigated for program abuse and suspended or excluded as authorized providers.

The CHAMPUS program is meant to supplement care in military treatment facilities, and benefits have been deliberately designed so that using military care is financially advantageous. When CHAMPUS beneficiaries use civilian sources, they are responsible for paying their share of the cost.

When providers waive any beneficiary liability, the CHAMPUS-determined allowable charge will be reduced by the same amount, whether payment is made to the patient or the provider. In addition, a pattern of waiving a patient's cost-share or deductible is considered to be program abuse and the provider may be subject to administrative sanctions. Write-offs of bad debts under generally accepted accounting practices are not considered improper waivers of cost-shares.

---

## *Hepatitis B Perinatal Prevention Program*

---

The Immunization Division, Maryland Department of Health and Mental Hygiene (DHMH), has received supplementary funding from the Centers for Disease Control for a Hepatitis B Perinatal Prevention Program. The primary objective of this activity is to prevent morbidity due to perinatal transmission of the hepatitis B virus.

This program will coordinate and supplement various activities related to perinatal hepatitis B (HBV) in Maryland. Hepatitis B vaccine and hepatitis B immune globulin (HBIG), and hepatitis blood-screening provided by the program are designated for infants born to women who are HBV carriers, and for household and sexual contacts of these women. Recipients should be unable to purchase Hepatitis B vaccine and HBIG by other means (i.e., without insurance, without Medical Assistance, and unable to pay).

Additional information may be obtained from the Communicable Disease Section of your local health department or the DHMH Immunization Division at (301) 225-6679.

---

## *HCFA Allows Physician Counsel*

---

Health Care Financing Administrator Gail Wilensky PhD has concurred with the American Medical Association (AMA) that physicians in the Professional Review Organization (PRO) sanction process have the right to physician counsel as well as legal counsel.

In a letter to AMA Executive Vice President James Todd MD, Wilensky said physicians should have the right to have physician counsel present



during any meeting conducted under the PRO sanction process. Physician counsel may offer expert testimony and answer questions.

If you have any questions regarding the physician counsel issue, call Rose Matricciani, staff for Med Chi's PRO Monitoring Committee, at 301-539-0872 or 1-800-492-1056.

---

### *Prince George's County Medical Society Names New CEO*

---

Diane L. Briggs was recently named Executive Director of the Prince George's County Medical Society. Ms. Briggs comes to this position from the Montgomery County Medical Society where she had been Assistant Executive Director and Director of Communications since 1985. A former P.G. County public school teacher, Ms. Briggs has devoted a significant portion of her career in organized medicine to health education in the schools and the community by developing programs in smoking cessation and prevention, drug/alcohol use, and nutrition. In her capacity as Director of Communications, she was Managing Editor of *Montgomery Medicine*, a monthly magazine for Montgomery County physicians.

---

### *Doctor/Lawyer/ Teacher Partnership Against Drugs*

---

Physicians who have volunteered for or are interested in participating in the Doctor/Lawyer/Teacher Partnership Against Drugs are encouraged to attend a special meeting on Friday, May, 10 1991 during the Med Chi Annual Meeting at the University of Maryland Center of Adult Education in College Park, MD. During the meeting, doctors and lawyers who have participated in the program will talk about their experiences and accomplishments. In addition, there will be a discussion of future applications of the program and other techniques for drug abuse prevention in Maryland children.

---

### *Drug Abuse Conference Monograph Available*

---

Copies of a monograph of the proceedings of "Practical Clinical Management: Drug Abuse Education for the Primary Care Physician," a Med Chi conference held in October 1990, are now available for Med Chi physicians. The monograph was developed as a follow-up to the conference and is intended to educate Maryland physicians about the growing need for medical intervention in the problem of substance abuse in our society. Copies of the monograph are available to Med Chi members for \$5.00. To order, call Lori Robinson in Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056.

---

### *Guide to HIV Care Available*

---

The AIDS Care Program of The Johns Hopkins Medical Institutions now offers, "Recommendations for Medical Care of Persons With HIV Infection," a booklet that provides guidelines for the care of patients with HIV infection. The recommendations in this booklet, dated January 1991, reflect the policies of the AIDS Care Program of the Johns Hopkins Hospital where approximately 2,000 persons with this infection are currently being followed. Physicians are cautioned that recommendations for AIDS care change frequently. An updated version of this guide is anticipated in 3-6 months. To order a free copy of the booklet, contact The Johns Hopkins Hospital AIDS Services at 301-955-1754.

---

### *AMA Hazardous Waste Pamphlet Available*

---

The AMA recently published "Why You Need to Know About Hazardous Waste," a new booklet designed to provide hazardous waste information to physicians concerned about the environment.

The booklet contains information on hazardous waste laws and offers guidelines on how physicians can protect their communities against haz-

ardous waste. To order a copy of this free booklet, write the AMA Department of Risk Assessment at 515 N. State St., Chicago, IL 60610 or call 312-464-4541.

---

## *New Abortion Law*

---

A copy of the changes made to the Maryland abortion law, as passed by the legislature and signed by Governor Schaefer on February 18, 1991, begins on page 347 of this issue and is provided for your information. Med Chi is currently studying this law and plans to provide physicians with guidelines to facilitate compliance with the law. Physicians are invited to review the changes to the law and mail inquiries to Stephen Buckingham, Esq. in Med Chi's Legal Department at 1211 Cathedral Street, Baltimore, MD 21201 (Inquiries may also be faxed to 301-547-0915).

---

## *Call for Papers, Presentations, Lectures*

---

Med Chi invites specialty societies, organizations, faculty members, academic centers, and Med Chi committees to participate in the scientific program at the 1991 Med Chi Semiannual Meeting to be held September 13 - 15, 1991 at the Carousel Hotel and Resort, Ocean City, Maryland.

Med Chi encourages specialty societies and organizations to collaborate in jointly planning sessions that will have a multidisciplinary/interdisciplinary focus. When feasible and appropriate, sessions should target the broadest spectrum of Maryland physicians.

An **Application For Presentation Submission** can be obtained by calling the Continuing Medical Education office at Med Chi, 301-539-0872 or 1-800-492-1056. **DEADLINE FOR SUBMISSION: FRIDAY, JUNE 3, 1991**

## MEET AT THE BEACH!

Hear invited guest speaker  
U.S. Surgeon General Antonio Novello MD  
at

**Med Chi's 1991 Semiannual Meeting  
Friday, Saturday and Sunday,  
September 13, 14, 15, 1991**

in the  
Carousel Hotel and Resort  
on the beach at 118th Street, Ocean City, MD 21842.

All physicians staying at the meeting are guaranteed  
an ocean front view.

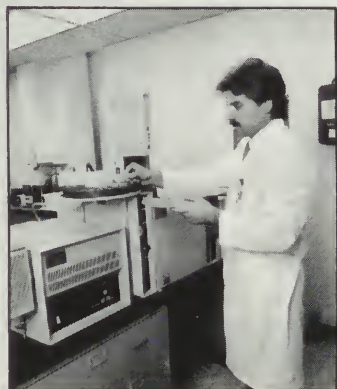
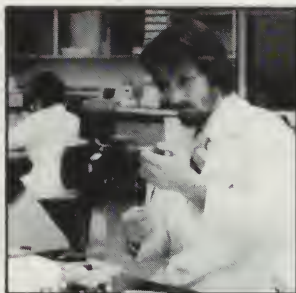
Watch the Executive Director's Newsletter for  
more details on events and CME opportunities.



Angelo J. Troisi, F.A.C.H.E.  
Executive Director



# The Maryland Medical Laboratory Network



## **Quality and Accessibility...**

An industry leader, Maryland Medical Laboratory, Inc. is renowned for its high standards of performance and quality. The advanced technology of Maryland Medical Laboratory, Inc. is available around the clock and easily accessible via an extensive transportation and telecommunication network.

## **Caring with Excellence...**


Maryland Medical Laboratory, Inc. is people serving people. With years of combined laboratory experience, the Maryland Medical Laboratory, Inc. staff of caring Pathologists, medical technologists, and hundreds of administrative and support personnel stand ready to serve you and your patients.  
**INQUIRIES WELCOME**



## **MARYLAND MEDICAL LABORATORY, INC.**

1901 Sulphur Spring Road Baltimore, Maryland 21227  
(301) 247-9100, Maryland 1 (800) 638-1731, U.S. 1 (800) 368-2576

## **THE MARK OF EXCELLENCE**



For your insulin-mixing  
or NPH-using patients

## Humulin<sup>70/30</sup> makes life easier

**Rapid onset and sustained  
duration insulin activity  
in a single vial**

- May offer enhanced control through a more physiologic activity profile
- Accurate dosing—eliminates mixing errors
- Convenient premixed dose for better compliance
- Easy to use—for patients who find mixing difficult



Specify  
**Humulin<sup>70/30</sup>**  
70% human insulin  
isophane suspension  
30% human insulin injection  
(recombinant DNA origin)

**Humulin has  
just the right mix**

Any change of insulin should be made cautiously and only under medical supervision.

Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species (beef, pork, beef-pork, human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

*Leadership In Diabetes Care*



**Eli Lilly and Company**  
Indianapolis, Indiana  
46285



**Abortion Bill**  
**Senate of Maryland: No. 162**

By: Senators Blount, Pica, and Baker  
Introduced and read first time: January 16, 1991  
Assigned to: Judicial Proceedings  
Committee Report: Favorable with amendments  
Senate action: Adopted with floor amendments  
Read second time: February 8, 1991

**CHAPTER 1**

AN ACT concerning

**Abortion**

FOR the purpose of revising certain statutory provisions relating to abortion; authorizing a physician to perform an abortion on an unmarried minor without notice to a parent or guardian of the minor if, in the professional judgment of the physician, the minor is mature and capable of giving informed consent or notice would not be in the best interest of the minor; prohibiting a physician from giving notice to a parent or guardian if the minor decides not to have the abortion; repealing a certain provision of law related to certain information that must be provided prior to an abortion; repealing certain provisions of law related to abortion referral services; *clarifying a provision of law related to referral services*; requiring that an abortion be performed by a licensed physician; providing that the State may not interfere with the decision of a woman to terminate a pregnancy if certain conditions exist and under certain circumstances; specifying that the State may not interfere with a woman's decision to terminate a pregnancy at any time if certain circumstances exist; providing a certain immunity for a physician under certain circumstances; authorizing the Department of Health and Mental Hygiene to adopt certain regulations related to the termination of a human pregnancy; repealing a provision of law related to the imposition of certain penalties against certain persons who violate certain provisions of law related to the termination of a human pregnancy; repealing a provision of law related to certain disciplinary actions against a licensed physician for performing an abortion outside a licensed hospital; defining certain terms; making provisions of this Act severable; *specifying that if a certain provision of this Act is petitioned to referendum and rejected by the voters, such rejection does not affect other provisions of the Act unless the other provisions are also petitioned to referendum and rejected by the voters* and generally relating to abortion.

BY repealing and reenacting, with amendments,  
Article - Health - General

Section 20-103; and 20-214 to be under the amended part "Part IV. Effect of Refusal to Participate" Annotated Code of Maryland (1990 Replacement Volume and 1990 Supplement)

BY repealing

Article - Health - General  
Section 20-201 through 20-206 and the part "Part I. Abortion Referral Services"; and 20-208, 20-210, and 20-211  
Annotated Code of Maryland  
(1990 Replacement Volume and 1990 Supplement)

BY adding to

Article - Health - General  
Section 20-208 and 20-209 to be under the amended part "Part II. Abortion Procedures" Annotated Code of Maryland (1990 Replacement Volume and 1990 Supplement)

BY repealing and reenacting, with amendments,

Article - Health Occupations  
Section 14-404(a)(23),(24),(25),(26),(27),(28),(29), and (30)  
Annotated Code of Maryland  
(1991 Replacement Volume)

SECTION 1, BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,  
That the Laws of Maryland read as follows:

**Article - Health - General**

20-103.

- (a) Except as provided in subsections (b) and (c) of this section, a physician may not perform an abortion on an unmarried minor unless the physician first gives notice to a parent or guardian of the minor.
- (b) The physician may perform the abortion without notice to a parent or guardian if:
  - (1) The minor does not live with a parent or guardian; and
  - (2) A reasonable effort to give notice to a parent or guardian is unsuccessful.
- (c) (1) The physician may perform the abortion, without notice to a parent or guardian of a minor if, in the professional judgment of the physician[,]:
  - (I) [notice] NOTICE to the parent or guardian may lead to physical or emotional abuse of the minor;
  - (II) THE MINOR IS MATURE AND CAPABLE OF GIVING INFORMED CONSENT TO AN ABORTION; OR
  - (III) NOTIFICATION WOULD NOT BE IN THE BEST INTEREST OF THE MINOR.
- (2) The physician is not liable for civil damages

or subject to a criminal penalty for a decision under this subsection not to give notice.

- (d) The postal receipt that shows an article of mail was sent by certified mail, return receipt requested, bearing a postmark from the United States Postal Service, to the last known address of a parent or guardian and that is attached to a copy of the notice letter that was sent in that article of mail shall be conclusive evidence of notice or a reasonable effort to give notice, as the case may be.
- (E) **A PHYSICIAN MAY NOT PROVIDE NOTICE TO A PARENT OR GUARDIAN IF THE MINOR DECIDES NOT TO HAVE THE ABORTION.**

**[Part I. Abortion Referral Services]**

[20-201.

A person may not engage in or advertise any abortion referral service that is carried on for profit and includes the referral or recommendation of any individual to a physician, hospital, health-related facility, or dispensary.]

[20-202.

A physician, hospital, health-related facility, or dispensary may not make an agreement with an abortion referral service located in or doing business in another state if the abortion referral service would be prohibited under §20-201 of this subtitle if the service were located in or doing business in this State.]

[20-203.

A person may not operate any abortion referral service unless the service is registered with the Department.]

[20-204.

A person who engages in any abortion referral service may not accept, solicit, or divide any fee received by a physician, hospital, health-related facility, or dispensary that performs or induces an abortion on any individual brought, recommended, or referred to that physician, hospital, health-related facility, or dispensary.]

[20-205.

The Department shall adopt rules and regulations for abortion referral services, including medical standards and guidelines for referral procedure and training for the staff.]

[20-206.

A person who violates any provision of Part I of this subtitle is guilty of a misdemeanor and on conviction is subject to a fine not exceeding \$5,000 or imprisonment not exceeding 1 year or both.]

[20-208.

- (a) No person shall terminate or attempt to terminate or assist in the termination or attempt at termination of a human pregnancy otherwise than by birth, except that a physician licensed by the State of Maryland may terminate a human pregnancy or aid or assist or attempt a termination of a human pregnancy if said termination takes place in a hospital accredited by the Joint Commission for Accreditation of Hospitals and licensed by the State Board of Health and Mental Hygiene and if one or more of the following conditions exist:
- (1) Continuation of the pregnancy is likely to result in the death of the mother;
  - (2) There is a substantial risk that continuation of the pregnancy would gravely impair the physical or mental health of the mother;
  - (3) There is substantial risk of the birth of the child with grave and permanent physical deformity or mental retardation;
  - (4) The pregnancy resulted from a rape committed as a result of force or bodily harm or threat of force or bodily harm and the State's Attorney of Baltimore City or the county in which the rape occurred has informed the hospital abortion review authority in writing over his signature that there is probable cause to believe that the alleged rape did occur.
- (b) In no event shall any physician terminate or attempt to terminate or assist in the termination or attempt at termination of a human pregnancy otherwise than by birth unless all of the following conditions exist:
- (1) Not more than twenty-six weeks of gestation have passed (except in the case of a termination pursuant to subsection (a)(1) or where the fetus is dead); and
  - (2) Authorization therefor has been granted in writing by a hospital abortion review authority appointed by the hospital.
- (c) The hospital abortion review authority shall keep written records of all requests for authorization and its action thereon. An annual report of the therapeutic abortions performed in Maryland shall be made by the director of the hospital and its governing board. Such reports shall include the number of requests, authorizations and performances, the grounds upon which such authorizations were granted, and the procedures employed to cause the abortions and such reports shall be forwarded to the Joint Commission on Accreditation of Hospitals and the State Board of Health and Mental Hygiene for the purpose of



insuring that adequate and proper procedures are being followed in accredited hospitals. Such information, which is not subject to the physician-patient privilege, may be made available to the public. Said reports shall not include the names of the patients aborted.]

**Part II. Abortion [Restrictions] PROCEDURES**

20-208.

AN ABORTION MUST BE PERFORMED BY A LICENSED PHYSICIAN.

20-209.

(A) IN THIS SECTION, "VIALE" MEANS THAT STAGE WHEN, IN THE BEST MEDICAL JUDGMENT OF THE ATTENDING PHYSICIAN BASED ON THE PARTICULAR FACTS OF THE CASE BEFORE THE PHYSICIAN, THERE IS A REASONABLE LIKELIHOOD OF THE FETUS'S SUSTAINED SURVIVAL OUTSIDE THE WOMB.

(B) EXCEPT AS OTHERWISE PROVIDED IN THIS SUBTITLE, THE STATE MAY NOT INTERFERE WITH THE DECISION OF A WOMAN TO TERMINATE A PREGNANCY:

(1) BEFORE THE FETUS IS VIALE; OR  
(2) AT ANY TIME DURING THE WOMAN'S PREGNANCY, IF:

(I) THE TERMINATION PROCEDURE IS NECESSARY TO PROTECT THE LIFE OR HEALTH OF THE WOMAN; OR

(II) THE FETUS IS AFFECTED BY GENETIC DEFECT OR SERIOUS DEFORMITY OR ABNORMALITY.

(C) THE DEPARTMENT MAY ADOPT REGULATIONS THAT:

(1) ARE BOTH NECESSARY AND THE LEAST INTRUSIVE METHOD TO PROTECT THE LIFE OR HEALTH OF THE WOMAN; AND

(2) ARE NOT INCONSISTENT WITH ESTABLISHED MEDICAL PRACTICE.

(D) THE PHYSICIAN IS NOT LIABLE FOR CIVIL DAMAGES OR SUBJECT TO A CRIMINAL PENALTY FOR A DECISION TO PERFORM AN ABORTION UNDER THIS SECTION MADE IN GOOD FAITH AND IN THE PHYSICIAN'S BEST MEDICAL JUDGMENT *IN ACCORDANCE WITH ACCEPTED STANDARDS OF MEDICAL PRACTICE.*

[20-210.

(a) A person is guilty of a misdemeanor if the person:

CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.

*Italics* indicate amendments to bill.

(1) Sells or gives, or causes to be sold or given, any drug, medicine, preparation, instrument, or device for the purpose of causing, inducing, or obtaining a termination of human pregnancy other than by a licensed physician in a hospital accredited by the Joint Commission for Accreditation of Hospitals and licensed by the State Board of Health and Mental Hygiene; or

(2) Gives advice, counsel, or information for the purpose of causing, inducing, or obtaining a termination of human pregnancy other than by such physician in such a hospital; or

(3) Knowingly assists or causes by any means whatsoever the obtaining or performing of a termination of human pregnancy other than by such physician in such a hospital.

(b) Any person who violates any provision of this section, upon conviction, is subject to a fine of not more than five thousand dollars for each offense, or to imprisonment for not more than three years, or both such fine and imprisonment. The penalties in this section are in addition to and not in substitution for any other penalty or penalties applicable to particular classes of persons under other laws of this State.]

[20-211.

(a) This section does not apply if the attending physician certifies that an abortion is necessary to save the life of the woman.

(b) Before a physician performs an abortion, the woman undergoing the procedure shall be advised of the extent to which:

(1) Financial and other material assistance to carry the pregnancy to a normal delivery is available;

(2) Financial and other material assistance to raise and support her child is available; and

(3) Assistance from a licensed and regulated adoption agency is available if she chooses not to keep the baby.

(c) In cooperation with the Department of Health and Mental Hygiene, the Department of Human Resources shall prepare annually, periodically update, and publish a list of federal, State, and private sources of the types and extent of assistance referred to in subsection (b) of this section, and shall distribute this published information to each hospital, clinic, physician's office, and other facility where an abortion is performed.

(d) The signed document, of a woman who seeks an abortion, indicating that she has been counseled concerning the published information referred to in subsection (c) of this section is evidence that the requisite information was given

~~Strike out~~ indicates matter stricken from the bill by amendment or deleted from the law by amendment.

to the woman. The signed document shall become part of the medical record.

- (e) A person who willfully violates any provision of subsection (b) of this section is guilty of a misdemeanor and on conviction is subject to a fine of not more than \$500.]

**Part IV. Effect of Refusal to Participate [or Refer]**

20-214.

- (a) (1) A person may not be required to perform or participate in [, or refer to any source for,] any medical procedure that results in artificial insemination, sterilization, or termination of pregnancy.
- (2) The refusal of a person to perform or participate in [, or refer to a source for,] these medical procedures may not be a basis for:
- (i) Civil liability to another person; or
- (ii) Disciplinary or other recriminatory action against the person.
- (b) (1) A licensed hospital, hospital director, or hospital governing board may not be required[:
- (i) To] TO permit, within the hospital, the performance of any medical procedure that results in artificial insemination, sterilization, or termination of pregnancy[; or
- (ii) To refer to any source for these medical procedures].
- (2) The refusal to permit [or to refer to a source for] these procedures may not be grounds for:
- (i) Civil liability to another person; or
- (ii) Disciplinary or other recriminatory action against the person by this State or any person.
- (c) (1) The refusal of an individual to submit to or give consent for an abortion or sterilization may not be grounds for loss of any privileges or immunities to which the individual otherwise would be entitled.
- (2) Submitting to or granting consent for an abortion or sterilization may not be a condition precedent to the receipt of any public benefits.
- (D) A PERSON WHO IS NOT A HEALTH CARE PROVIDER LICENSED OR OTHERWISE AUTHORIZED TO PROVIDE HEALTH CARE UNDER THE HEALTH OCCUPATIONS ARTICLE IS NOT REQUIRED TO REFER AN INDIVIDUAL TO ANY PERSON FOR ANY MEDICAL PROCEDURE THAT RESULTS IN ARTIFICIAL INSEMINATION, STERILIZATION, OR TERMINATION OF PREGNANCY.

**Article - Health Occupations**

14-404.

- (a) Subject to the hearing provision of §14-405 of this subtitle, the Board, on the affirmative vote of

a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:

- (23) [Performs an abortion outside a licensed hospital;
- (24)] Willfully submits false statements to collect fees for which services are not provided;
- [(25)] (24) Was subject to investigation or disciplinary action by a licensing or disciplinary authority or by a court of any state or country for an act that would be grounds for disciplinary action under this section and the licensee:
- (i) Surrendered the license issued by the state or country to the state or country; or
- (ii) Allowed the license issued by the state or country to expire or lapse;
- [(26)] (25) Knowingly fails to report suspected child abuse in violation of §5-704 of the Family Law Article;
- [(27)] (26) Fails to educate a patient being treated for breast cancer of alternative methods of treatment as required by §20-113 of the Health - General Article;
- [(28)] (27) Sells, prescribes, gives away, or administers drugs for illegal or illegitimate medical purposes;
- [(29)] (28) Fails to comply with the provisions of §12-102 of this article; or
- [(30)] (29) Refuses, withholds from, denies, or discriminates against an individual with regard to the provision of professional services for which the licensee is licensed and qualified to render because the individual is HIV positive.

**SECTION 2. AND BE IT FURTHER ENACTED.**

That if any provision of this Act or the application thereof to any person or circumstance is held invalid for any reason in a court of competent jurisdiction, the invalidity does not affect other provisions or any other application of this Act which can be given effect without the invalid provision or application, and for this purpose the provisions of this Act are declared severable.

**SECTION 3. AND BE IF FURTHER ENACTED,** *That if any portion of the amendments to §20-103 of the Health - General Article made by this Act is petitioned to referendum and rejected by the voters, such rejection does not affect other provisions of this Act and the remaining provisions shall be given effect unless they too are petitioned to referendum and rejected by the voters.*

**SECTION 3. 4. AND BE IT FURTHER ENACTED,** That this Act shall take effect July 1, 1991. ■

CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.  
[Brackets] indicate matter deleted from existing law.  
*Italics* indicate amendments to bill.

~~Strike out~~ indicates matter stricken from the bill by amendment or deleted from the law by amendment.



# COMMITTED TO EXCELLENCE

*Roche  
Laboratories  
presents the  
winners of  
the 1990*



Please join us in honoring these outstanding Roche sales representatives who have distinguished themselves by a truly exceptional level of professionalism, performance and dedication to quality health care.

Throughout the year, each of these award-winning individuals has consistently exemplified the Roche Commitment to Excellence, and we're proud to invite you to share in congratulating them on their achievement.



Clifford R. Crown



Ronald C. Hardnock



Henry C. Shimonkevitz

# COMMITTED TO TOTAL HEALTH CARE

*Roche  
Laboratories  
presents the  
resource library  
for patient  
information*

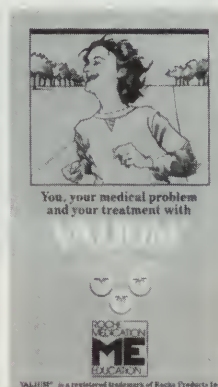
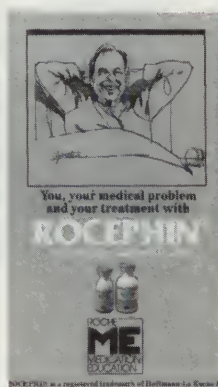
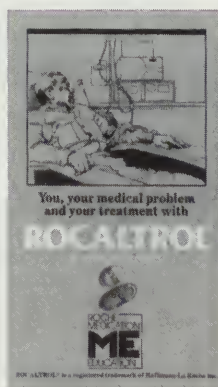
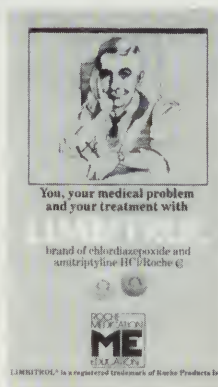
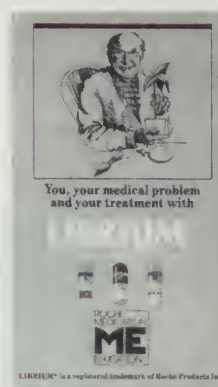
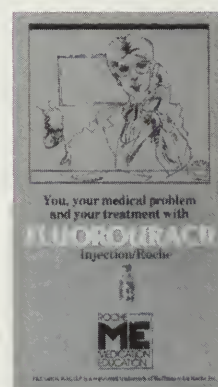
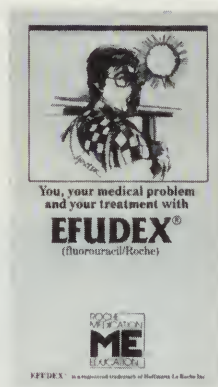
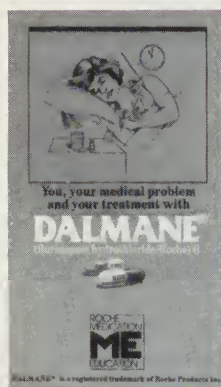
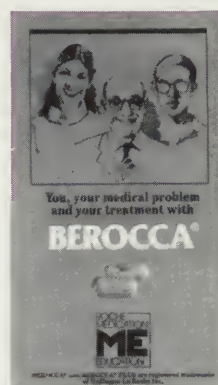
## ROCHE ME MEDICATION EDUCATION

Your Roche representative offers you access – without expense or obligation – to a comprehensive library of patient information booklets designed to supplement rather than supplant your rapport with your patients.

Each booklet helps you provide...

- Reinforcement of your instructions
- Enhancement of compliance
- Satisfaction with office visits

Your Roche representative will be happy to provide a complete catalog of available booklets and complimentary supplies of those that are applicable to your practice.





---

## J. David Nagel MD, Med Chi President 1991-1992

**Betsy Newman**

*Betsy Newman is Director of the Public Relations Department for the Medical and Chirurgical Faculty of Maryland.*

---

*"I think it's a privilege to be a physician. I don't know of anything else in this world I'd rather do."*

---

Among the piles of paperwork and patient folders scattered throughout Dr. J. David Nagel's Lutherville office are some of his most prized possessions -- photographs of his wife and children, a medical school diploma, and two inch-high fuzzy bears. One of them, the "doctor bear," came from Genevieve, a diabetic patient whose leg he saved from amputation. The other, "leprechaun bear," is from Gertrude, a patient he helped both physically and psychologically to a full recovery. To Dr. Nagel, the bears not only represent two of his most gratifying medical achievements but they also symbolize what is most important to him and his practice: his patients.

"I think it's a privilege to be a physician," he grins broadly while pointing out that many of the pictures on his walls were framed by another of his esteemed patients. "I don't know of anything else in this world I'd rather do."

But Dr. Nagel did not always aspire to be a physician. "As a child, I wanted to be a cabdriver," he says, but his father insisted on medical school. "My father was a doctor, my uncle was a doctor, and all firstborn sons in my family were expected to become doctors, so tradition prevailed."

Looking back, Dr. Nagel realizes he never really thought about a career until after he enrolled at the University of Maryland School of Medicine. "I didn't like it," he recalls. "The classes were difficult and I nearly flunked out my freshman year." Not until the middle of his second year, after getting involved with courses that had clinical applications such as pathology, did Dr. Nagel begin to flourish. After graduating in 1964, he served his internship and residency at Mercy Hospital where he became Chief Resident in Medicine in 1967. Later, he became the first person in his graduating medical school class to pass his boards in Internal Medicine.

Almost immediately, Dr. Nagel set up a private practice in Towson with his partner, E. Lee Robbins MD, a friend and fellow graduate of Mercy's training program. After sharing twenty-three years of practice, the two partners now have an office proudly adorned with patient memorabilia.



## Med Chi Communications

As President, he looks forward to spreading his message throughout the State by traveling to Med Chi's component medical societies. Regional meetings were initiated three years ago in an effort to improve Med Chi communications. Med Chi presidents now travel to western, eastern, and southern Maryland to visit with area physicians and hear regional concerns. Dr. Nagel is anxious to continue this tradition and desires to bring more medical society issues to rural areas. "In the last few years, I think the leadership of Med Chi has become aware of a shifting of emphasis away from large metropolitan issues toward more suburban and rural physician needs. I predict places like Harford, Carroll, and Howard County will exper-

ience growth over the next decade for Maryland physicians."

Dr. Nagel hopes his visits to county medical societies will help more physicians keep up-to-date on important medical issues. In order to accurately represent the views of all Med Chi members, Dr. Nagel believes physicians must attend component medical society meetings and express their opinions. "Organized medicine is the physician's negotiating arm," he says. "Input from the membership is essential in order for Med Chi to take a proactive stance."

Taking a proactive stance on medical issues, especially those in the General Assembly, is another goal Dr. Nagel aspires to achieve as Med Chi President. "Rather than only working to water-down proposed regulations or trying to defeat bills," he contends, "Med Chi should introduce more legislation to reflect the viewpoint of Maryland physicians."

## AIDS

AIDS was one issue Med Chi took an active position on in the General Assembly this year. Med Chi's Committee on AIDS and Legislative Committee, with the assistance of Med Chi's legal counsel, drafted legislation that would assure the protection of health care workers exposed to the human immunodeficiency virus (HIV). The legislation was eventually introduced during the 1991 session by Senator Nancy Murphy as Senate Bill 156. In support of Med Chi's assertive stance on AIDS, Dr. Nagel adds his view that all patients should be tested upon their admission to a hospital. "If an HIV patient comes into a hospital and if there's going to be exposure to blood and blood products, I think it's very important we know about it to help prevent the spread of the disease to other health care workers and to other patients."

## The Physician/Patient Relationship

During his term as Med Chi President, Dr. Nagel looks forward to relating his grassroots patient-relations philosophy to other Maryland physicians. "Unfortunately, the economics of medicine has substantially affected professionalism in medicine," he says, and explains that the increasing emphasis on cutting costs by the government and insurance companies has put tremendous stresses on the physician/patient relationship. Economics is building a brick wall separating physicians and patients, according to Dr. Nagel. To break through this wall, he says, physicians must spend more time with their patients, thoroughly explaining their diagnoses and treatments, and then, give that little extra to preserve the physician/patient relationship. "Patients entrust their physicians with their lives. As a doctor, it's your responsibility to provide for your patients regardless of whether or not they have the money to pay for it." Physicians do more than provide a service for a fee, they give of themselves, which can never be measured in dollars and cents.

Quality, affordable health care should be the primary goal of organized medicine, maintains Dr. Nagel, who admits his commitment to this ideal drove him to seek the office of President. "Physicians may argue about their political and philosophical differences but we all have one vital trait in common: we are practicing physicians. The medical society brings us all together in a unity of purpose. We're a society of doctors and when we scrape away all the bureaucratic nonsense, we get down to what's really important: quality care for the patient and preserving professionalism. On that fact we all agree."



## Physician Ownership

Another issue in the Maryland legislature this year was physician ownership of laboratories. Dr. Nagel concurs with the American Medical Association's opinion that physicians should disclose their financial interests in for-profit health facilities to their patients. He is vehemently opposed to any government regulations designed to prevent physicians from referring patients to these facilities because such a law would adversely affect patients. In rural areas, for example, there is often only one medical laboratory. If a law restricting physician referral was passed, physicians with a financial investment in this laboratory would be forced to refer their patients to other facilities. As a result, patients would travel longer distances for medical tests, wait longer for test results and, ultimately, pay more for their medical care.

## Government Regulation of Medicine

He expresses his regret that the majority of physicians are suffocating under "mounds of regulations" because of the failings of a few. As an example, he describes another proposed regulation at the federal level that would monitor and restrict physician gifts from drug companies in order to regulate doctors who abuse prescribing practices. In his opinion, these types of regulation hinder physicians more than they help protect patients. "I'm wary of too many ethical guidelines from the government," asserts Dr. Nagel.

How many regulations can physicians tolerate before the regulations influence patient care? Dr. Nagel opposes any government proposals that would lead to rationing of care. "We've already agreed that we're going to care for the over sixty-five population for a lower price than others," admits Dr. Nagel, who feels the Medicare system is the first step toward a national fee schedule for physicians. "I'm concerned because Medicare and the intervention of many health insurance programs mandate a certain type of practice. They place restrictions on the kind and amount of medical care you can give... But there is no way to write down on a prescription pad or have a computer analyze the benefit of seeing a patient one more time in terms of his or her overall health."

## Physician Payment Systems and Health Access America

Dr. Nagel concedes that the Medicare program needs some sort of fee structure, such as the proposed Resource-Based Relative Value Scale (RBRVS). However, he is "totally against" profile systems used by insurance companies that are not based

on objective criteria. He purports, "There's no reason why a doctor who's been in practice ten years and a doctor who's been seeing patients for twenty years should get paid a different sum of money for doing exactly the same procedure." To assure equity in any payment system, Dr. Nagel insists that organized medicine act as an intermediary, negotiating the fundamental elements of the economics of medicine while also advocating for patients.

Dr. Nagel believes the American Medical Association (AMA) has succeeded in influencing this medical economics debate through its leadership role in developing Health Access America. This proposal to improve access to affordable, quality health care was developed in response to Canadian-style health care and national health insurance proposals. Health Access America is unique because it builds upon the current strengths of our medical system while increasing access to the more than thirty million Americans who lack health insurance. Dr. Nagel agrees with the basic premise of the proposal -- that all Americans need access to affordable, quality health care -- and hopes that Med Chi can take an active part in future steps toward realizing the sixteen points of the Health Access America proposal.

## Practice Parameters

One of these sixteen points encourages the development of professional practice parameters in order to assure that only appropriate, high quality medical services are provided, thus lowering costs and maintaining quality care. Dr. Nagel thinks practice parameters can be a way for physicians to "refine" procedures learned in medical school and sees them as measuring sticks to be used as guides for medical treatment protocols that are not clear in all respects.

If used in this way, Dr. Nagel believes parameters could end many of the "defensive medicine" practices physicians use to avoid liability actions. Moreover,





parameters could be employed to detect physicians who abuse the system through gross and willful overutilization of resources. "Overutilization is more than defensive medicine," he states, "it's prescribing a second CAT-scan when only one is necessary, or ordering a blood sugar count for the same patient every day." Dr. Nagel blames overutilization of resources for helping drive up health care costs and believes that physicians guilty of willful overutilization should be subject to disciplinary measures.

### Liability Insurance and Tort Reform

Ideally, Dr. Nagel views practice parameters as a means to obviate the use of physicians as expert witnesses in malpractice cases. "Currently, most decisions in malpractice cases are based on a physician's ability to communicate," he says. "Many jurors look at the doctor testifying and think, 'He looks like he's telling the truth,' and then vote in his favor. If you have basic practice parameters, jurors can decide on guilt or innocence based on whether the physician adhered to predetermined guidelines."

If practice parameters are used in court, Dr. Nagel foresees fewer malpractice suits and lower liability insurance rates for physicians.

Dr. Nagel acknowledges Med Chi's efforts to improve the liability situation in Maryland as outstanding. "I think the ability to frivolously sue a physician is pretty well wiped out," he professes. "Med Chi has vigorously pursued relief from the high cost of liability insurance by working with regulators and insurance companies. We also are aware of the emotional impact of a suit and have established support systems for our members."

### Future of Med Chi

Med Chi upholds high quality medical care in Maryland, states Dr. Nagel, who wishes to initiate a

plan to help Med Chi run even more efficiently during his term in office. As President, he intends to propose a new leadership structure for Med Chi, similar in form to the AMA Board of Trustees. In this reorganization, the members of the Med Chi "Board of Trustees" (or the current Executive Committee) would be appointed for three-year terms. Each officer would be elected by the House of Delegates. According to Dr. Nagel, this new leadership structure would help Med Chi politically because members would not be faced with electing several new officers each year. It would also simplify many administrative matters complicated by the annual shuffle resulting from a change in officers. Dr. Nagel hopes his plan will be accepted by other Med Chi members and looks forward to input. "I don't have all the answers but longevity in leadership is important."

When asked about other goals during his term, Dr. Nagel replies, "I intend to say what I think... and I'm not afraid to ask the hard questions. In fact, I usually do ask the hard questions."

### Activities in Organized Medicine

Dr. Nagel first began to ask those hard questions and earn his peers' respect when he was elected to the Medical Executive Committee for Mercy Hospital in 1972. Three years later, he sought the office of Secretary/Treasurer of the medical staff at Franklin Square Hospital. He progressed on to the office of Vice President and ultimately became President of the medical staff in 1979.

Although a member of Med Chi since graduating medical school in 1964, Dr. Nagel became an active participant in organized medicine in 1979 when he was elected to the Baltimore County Medical Association's (BCMA) Board of Governors in 1979. In 1981, while serving as Medical Staff Representative to the Franklin Square Hospital Board, he also became Secretary to the BCMA. He later advanced to Vice President (1982), President-elect (1983), and President (1984) of the BCMA. He served as Chairperson for the BCMA Board of Governors in 1985. He was also a member of the BCMA's Peer Review Committee from 1978 to 1980 and the BCMA's Ethics Committee in 1986.

Dr. Nagel first became involved with Med Chi when he served as Chairperson of the Med Chi Committee on Hospital Medical Staffs in 1983. The following year, he was elected to the Med Chi Council where he served as Vice Chairperson in 1987 and Chairperson in 1989.

While on the Med Chi Executive Committee (1987), Dr. Nagel earned a reputation for speaking out and was selected as an alternate delegate to the AMA in 1989. In 1990, he was nominated and won the office of Presi-







dent-elect. He will be inaugurated as President on May 10, 1991 during the House of Delegates session at the Annual Meeting in College Park, Maryland.

### Family Life

"My goals for the future? Well, I'd like to lose about ten pounds, maybe get to exercise a bit more," quips Dr. Nagel. Hopefully my experience with organized medicine will help me in future endeavors. I enjoy dealing with issues of planning and mediation and I think I do better with creative activities rather than day-to-day management. I am proud to be part of the growth that has occurred in Med Chi over the past few years and have learned that success is not an accidental phenomenon. In 1983, when I first met Dr. James Todd, Executive Vice President of the AMA, he told me what his father told him, "Plan your work, and work at your plan." So to answer your question, I am in the planning stage now and one thing for sure, my plans include more time with my wife, Dianne, and my daughters, Jenny (25), Missy (22), and Carrie (15), as well as good friends who have been so supportive over the years. Dianne, a nursing graduate of the University of Maryland, currently works as Director of Utilization Review for Sheppard and Enoch Pratt Hospital. The Nagels and daughter Carrie live in scenic Butler. Born and raised in Baltimore County, Dr. Nagel admits, "I have an affinity for Baltimore County and for this State. Maryland's a great place to live."

### Goals for Maryland Medicine

As for the future of Maryland medicine, Dr. Nagel is ready for anything. "I'm committed to my Society and committed to what I think is right." And as for the future of American medicine, Dr. Nagel quotes President Bush: "He once said 'Put us on a level playing field and we can outperform and outproduce any country in the world.' I say the same thing about American medicine. We can and will outperform any medical system in the world." ■

### *Professional Employment, Inc.*

SPECIALIZING IN RECRUITMENT FOR THE MEDICAL PROFESSION

*Beverly F. Epstein, MPA*

#### When you need Experienced, Qualified, Permanent:

- Medical Secretaries
- Medical Transcribers
- Receptionists
- Medical Assistants
- Billing/Insurance Secretaries
- Office Managers

**PROFESSIONAL EMPLOYMENT, INC.**  
**(301) 560-2646**

**FEE:** Permanent Placement - a one time fee of \$625.00 per placement.

**TERMS:** Permanent Personnel are placed with a one month 'grace' period which is in effect from starting date. If employment is not mutually satisfactory during this time period, additional qualified applicants will be submitted and/or a full credit will be applied only after receipt of payment.

## We Build Beautiful Sunlit Home Additions



**Sunspace Design Studio, Inc.**

**(301) 882-6200**

MHIC 16069

# MRI UPDATE



Figure 1



Figure 2

**CLINICAL HISTORY:** This is a 26-year-old male with back pain and right lower extremity radiation.

**FINDINGS:** This is an example of a normal study on a young adult. **COMMENT:** MRI is the screening test of first choice for suspected disorders of the lumbar spine. Notice the clear depiction of the normal L5-S1 disc (figure 1, crossed arrow). The discs of this patient exhibit high signal intensity reflecting normal hydration and none of the discs are narrowed. None of the discs indent the thecal sac which is of intermediate signal intensity and appears as the gray band in the center

of the image. The vertebral bodies are homogeneous and free of destructive lesions. The conus medullaris (arrow) is normal. This sagittal image demonstrates the advantages of MRI over other screening modalities. Routine CT scanning will not display the conus medullaris, lesions of which may masquerade as disc herniation. The general area of coverage is superior with MRI. Disc detail is much better displayed with MRI.

The axial image at L5-S1 (figure 2) exhibits delineation of intraspinal detail far superior to that of CT. The right S1 nerve root is clearly displayed (arrow) surrounded by normal perineural fat

which is the bright high intensity material in the periphery of the spinal canal. State-of-the-art MR images clearly display the bony anatomy of the lumbar spine including the facet joints (crossed arrow). Degenerative diseases and bony neoplasm are routinely detectable.

MRI involves no ionizing radiation and no intrathecal contrast material is needed. It is a patient-friendly outpatient examination well suited for screening purposes.



**Maryland  
Magnetic  
Imaging**

900 Toll House Avenue  
Frederick, MD 21701  
(301) 662-0077

Health Images facilities operate their MRI systems with all available upgrades including contiguous thin slices, high resolution head and body coils, state of the art surface coils, and cardiac gating.

Health Images facilities are a community resource available to all area physicians.



*Health Images, Inc.®*





## Because Life Should Be Worth Living.

It used to be that when patients with a serious or demanding illness were sent home from the hospital, in effect, they were being sent home to die. Today, we are sending them home to live.

Caremark is assisting these people—children, young mothers and fathers, working people in the prime of their lives, as well as the elderly—to keep the rhythm of their lives intact by providing them home infusion services with more clinical expertise and personal commitment than any other company.

A commitment to clinical treatment that enhances the quality of your patient's life. An easy referral process. Complete, autonomous service centers. Timely clinical feedback for you and psychosocial support for your patient.

And we're more than a company. Caremark is people who thrive on giving others hope, dignity, respect and an extended family for support.

With unwavering conviction, we value the principle that, regardless of disease state or condition, life should be worth living.

**Caremark, Inc.**  
10200 Old Columbia Road  
Columbia, Maryland 21046  
(800) 523-1435 or  
(301) 720-6060

# CAREMARK

Affiliate Baxter Healthcare Corporation

# P.I.E.'s quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. P.I.E. Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

## **QRP FACTS:**

**Strict Underwriting Criteria** — Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

## **Scheduled Premium Reductions** —

Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

**High Limits** — Backed by our reinsurer, Lloyd's of London, P.I.E. is able to offer higher coverage limits for qualifying doctors: up to

\$7 million for individual doctors and \$13 million for group policies. Lloyd's of London is the largest reinsurer in the world.

**Designed With Input from Doctors** — P.I.E.'s QRP plan is an innovative modified claims-made insurance specially designed with input from P.I.E.-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your P.I.E. representative, or our headquarters office today.

---

THE P.I.E. MUTUAL

---

INSURANCE COMPANY

---

North Point Tower • 1001 Lakeside Ave. • Suite 1800  
Cleveland, OH 44114-1149 • (216) 736-8400 • (800) 228-2335

---

**Winterich • Neff & Associates**  
7 East Redwood • Suite 810  
Baltimore, Maryland 21202  
(301) 234-2800





---

# Large Valvular Vegetations in Infective Endocarditis

Robert Dart MD and Wilson Gomer MD

*Dr. Dart is an internist in private practice in Baltimore, MD. Dr. Gomer was formerly a resident at Harbor Hospital Center, Baltimore, MD.*

---

*Patients with vegetations demonstrable by echocardiography tend to have more complications and a worse prognosis than patients without echo-demonstrated vegetations.*

---

Heart valve vegetation is the hallmark of bacterial endocarditis and can be demonstrated by echocardiography in a large percentage of cases (40 to 80 percent).<sup>1</sup> Patients with vegetations demonstrable by echocardiography tend to have more complications and worse prognosis than patients without echo-demonstrated vegetations.<sup>2-9</sup>

There is additional, albeit controversial, evidence that large vegetations are associated with poorer outcomes than small vegetations.<sup>2,4,10,11</sup> We report on a recent case of bacterial endocarditis with a massive valvular vegetation which illustrates many of the characteristic features of large vegetations identified by our literature review.

## Case Presentation

This was the first admission to our hospital for a thirty-year-old male with back pain of three days duration. He had a medical history of intravenous drug use but had otherwise been in excellent health until three days earlier when he experienced the onset of right shoulder and back pain. He was seen in the emergency room and sent home with analgesics, only to return three days later with worsening pain, chest tightness, and dizziness. He had no fever or chills. He had a moderate cigarette and alcohol habit, and was employed as a trash collector. He was a robust male in moderate distress secondary to pain. His temperature was 96.9° F, his pulse was 140 per minute, respirations were 24 per minute, and his blood pressure was 86/53 mm Hg. Positive findings were limited to a low grade systolic murmur along the right sternal border.

The urine was positive for bilirubin, protein, nitrites, blood and leukocytes, and contained moderate white cells, red cells, granular casts, and a few bacteria. His white blood count was 12,300 with no left shift, hematocrit was 40.7, and platelet count was 55,000. Abnormal chemistries included a sodium of 129 mEq/l, urea nitrogen of 68 mg/dl, creatinine of 2.7 mg/dl, total bilirubin of 3.9 mg/dl, direct bilirubin of 3.4 mg/dl, alkaline phosphatase of 230 u/l, serum glutamic-oxaloacetic transaminase (SGOT) of 230 u/l, and

serum glutamic-pyruvic transaminase (SGPT) of 108 u/l. An electrocardiogram (ECG) showed sinus tachycardia at a rate of 144, as well as right bundle branch block. Chest x-ray (Figure 1) showed a small right pleural effusion and diffuse infiltrates involving subsegments of the right lower lobe. Room air arterial blood gas showed a hydrogen ion concentration (pH) of 7.44, a partial carbon dioxide pressure (pCO<sub>2</sub>) of 24, an oxygen partial pressure (pO<sub>2</sub>) of 60, and a bicarbonate (HCO<sub>3</sub>) of 19.

The patient was admitted to the intensive care unit (ICU). On the first hospital day, his temperature started to rise. After blood and urine cultures were obtained, he was started on a third generation cephalosporin and trimethoprim-sulfamethoxazole. He underwent thoracentesis; pleural fluid smear showed gram positive cocci and the antibiotic coverage was changed to vancomycin and gentamicin. On the second hospital day, the patient was placed on mechanical ventilation due to severe hypoxemia. Blood cultures grew *Staphylococcus aureus* and alpha Streptococcus. *Staphylococcus aureus* also was cultured from the pleural fluid.

An M-Mode and 2-D echocardiogram (Figures 2 and 3) showed a huge vegetation on the anterior leaflet of the tricuspid valve measuring 5.45 cm in diameter, and moderately severe tricuspid insufficiency. A repeat echocardiogram five days later showed a vegetation that was much reduced in size (Figure 4).

A human immunodeficiency virus (HIV) antibody test was positive. On the fourth hospital day, bilateral infiltrates were noted on chest x-ray. His unstable

condition precluded transfer to another hospital for surgery. The infiltrates worsened and progressed to acute respiratory distress syndrome (ARDS) (Figure 5). His worsening respiratory failure was accompanied by renal failure and he died on the twelfth hospital day.

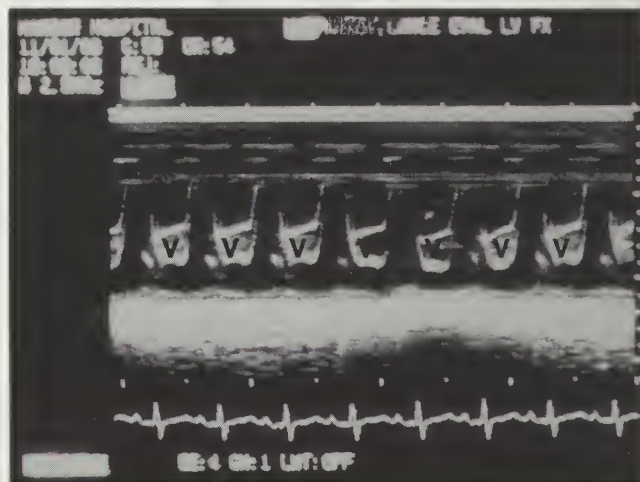


Figure 2. An M-Mode echocardiogram showing large vegetation. (Shown at V.)

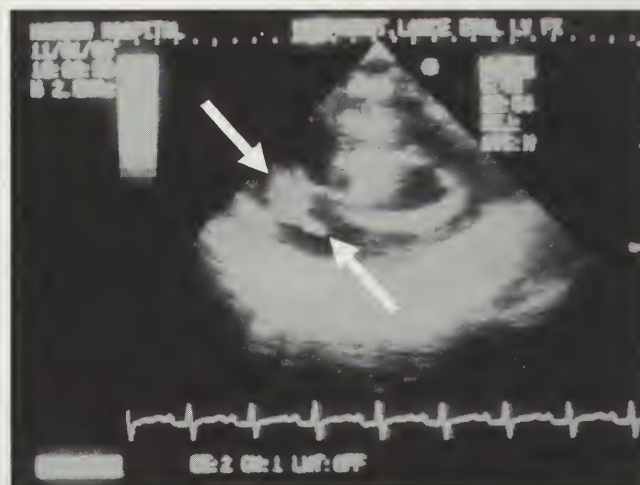


Figure 3. A 2-D echocardiogram showing a 5.4 cm vegetation. (Shown at arrows (→).)

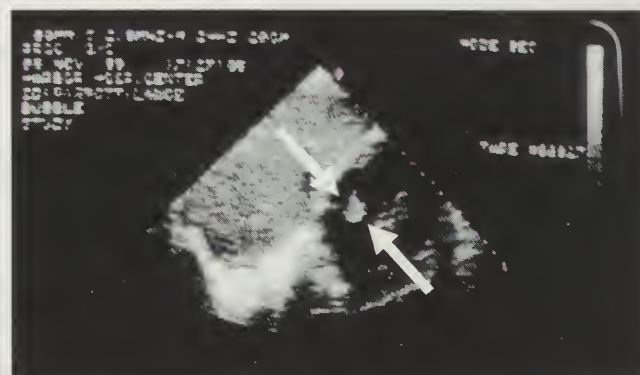


Figure 4. A repeat echocardiogram showing a vegetation much reduced in size. (Shown at arrows (→).)



Figure 1. Chest x-ray showing a small right pleural effusion and diffuse infiltrates involving subsegments of the right lower lobe.





**Figure 5.** Bilateral infiltrates worsened and progressed to ARDS.

## Discussion

Echocardiography is considered the technique of choice in demonstrating vegetations in bacterial endocarditis. It is sensitive in detecting vegetations as small as 2 mm.<sup>12</sup> Valvular vegetations are considered large if they are greater than 1 cm, and studies have reported vegetations as large as 5 cm in longest diameter.<sup>13</sup>

Various studies have been conducted to determine whether the presence of a vegetation or its size have any impact on the organism cultured, the valve involved, the complication rate, or the need for surgery.

**Organism cultured.** Classically, large vegetations are associated with fungal endocarditis.<sup>14,15</sup> However, fungal endocarditis is such a rare entity, that while fungal endocarditis may be associated with large vegetations, most large vegetations are not fungal.<sup>4</sup>

In most studies, vegetation size was not important in predicting the organism involved.<sup>4,5,9,16</sup> Patients with large vegetations were infected with the same organisms as patients with small vegetations. Robbins et al found that *Staphylococcus aureus* and streptococcus were the first and second most common organisms in patients with large vegetations, and that Streptococcus was the most common organism in patients with small vegetations.<sup>10</sup> In addition, Takeda et al found that *Staphylococcus aureus* was the most common organism in patients with any vegetation, regardless of size.<sup>6</sup>

But staphylococcus and streptococcus are the most prevalent organisms cultured in all cases of endocarditis. Customarily, the patient population has been more important in predicting the infecting organism, as, for example, in the propensity of intravenous drug users toward acquiring highly virulent *Staphylococcus aureus* infections.

**Valve involved.** The tricuspid is the valve most commonly infected with endocarditis from intravenous

drug use.<sup>16</sup> Most studies show that vegetations on this valve tend to be larger than on the mitral or aortic valves; the pulmonic valve is rarely affected.<sup>5,9,16,17</sup> This may be because the annular circumference of the tricuspid valve is larger than that of the mitral, and thus the vegetation has more room to grow. In addition, the systolic pressure in the right ventricle is lower than that in the left ventricle.<sup>17</sup> Despite the larger size, vegetations on the tricuspid valve are associated with less morbidity and mortality than left-sided vegetations.<sup>2,5,16</sup>

**Complications.** Most studies support evidence that the presence of an echo-demonstrated vegetation is associated with at least a two-fold higher incidence of complications, including congestive heart failure, systemic emboli, failure of medical therapy requiring surgical intervention, and death.<sup>2-9</sup> Such data underscore the importance of echocardiography in identifying a high-risk group that would benefit from early surgery.

Whether large vegetations cause more complications than small vegetations is controversial and results are mixed. Congestive heart failure (CHF) is the most common serious complication of patients with echo-demonstrated endocarditis and the leading cause of death.<sup>18</sup> It is usually caused by destruction of the valve by a vegetation and invariably heralds the need for surgery.<sup>5</sup> Since the vegetation is the instigator of the injury, it is not surprising that studies have shown an association between the presence of vegetations and the development of CHF,<sup>5,6</sup> and between large vegetations and CHF.<sup>2,4</sup> Other studies, on the other hand, have found no association between vegetation size and CHF.<sup>9</sup>

Before antibiotics were available, the incidence of emboli in endocarditis was as high as 80 percent, but current embolic rates are 15 to 30 percent.<sup>5</sup> The four principal sites of embolization are the brain, spleen, coronary arteries, and kidneys, but other sites may also be affected.<sup>18</sup> Roberts et al, for example, discovered acute pneumonia to be a dominant clinical feature of patients with vegetations demonstrated by echocardiography, and concluded that it was secondary to embolization from a right-sided vegetation.<sup>13</sup>

Because embolization occurs as friable pieces of vegetations separate and are propelled into the circulation,<sup>19</sup> it is hardly surprising that many studies demonstrate an increased incidence of embolic events among patients with echo-documented vegetations.<sup>5-7,9</sup> While Nasser et al found that large vegetations were associated with multiple emboli,<sup>7</sup> and Mugge et al found that patients with large vegetations had an increased incidence of emboli,<sup>9</sup> others found that vegetation size was not important in predicting embolization.<sup>2,4,5</sup>

**Treatment.** If vegetations in general, and large vegetations in particular, cause more complications, it follows that they would be associated with more medical failures and, thus, more need for surgery.<sup>16</sup> In fact, patients with large vegetations and non-streptococcus infections will rarely be cured by antibiotics alone,<sup>10,11</sup> and frequently require surgery.<sup>2,4,8</sup> The mortality rate

# You Should Be Taking Care of Your Patients

....Not Your Billing



**PPBSi**

Physician's Professional Billing Services, Inc.

**Leaders in technological billing since 1976**

...

Will speed up your cash and cure ailing accounts.

...

- Professional management available to represent your office to Medicare, Blue Shield, Medical Assistance and other insurance carriers.
- Our service relieves your staff from processing self-pay statements.
- Self-pay bills with individualized messages at your prescribed intervals.
- Secondary commercial insurance claims are automatically rebilled.
- A multitude of statistical reports are available, including complete financial audit trails and management reports.

...

**Call today so we may treat you.**

1•800•969•8382 / 1•301•825•5626

Locations in D.C. and Baltimore to serve you.

**PPBSi**

Physician's Professional Billing Services, Inc.

7215 York Road, Baltimore, Maryland 21212  
or phone (301) 825-5626

Please fill out and return this coupon promptly for more information about the many benefits that Physician's Professional Billing Services, Inc. can offer you.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_

for surgery is high, particularly if the surgery is delayed because preoperative organ failure occurs during medical treatment. Some investigators advocate early surgery for patients with echo-demonstrated vegetations who are at risk for major complications, before irreversible organ damage occurs.<sup>3</sup>

## References

1. O'Brien JT et al. Infective endocarditis and echocardiography. *Am Heart J* 1984; 108:386-94.
2. Buda AJ et al. Prognostic significance of vegetations detected by two-dimensional echocardiography in infective endocarditis. *Am Heart J* 1986; 112:1291-96.
3. Davis RS et al. The demonstration of vegetations by echocardiography in bacterial endocarditis. *Am J Med* 1980; 61:374.
4. Wong D et al. Clinical implications of large vegetations in infectious endocarditis. *Arch Intern Med* 1983; 143:1874-77.
5. Stewart JA et al. Echocardiographic documentation of vegetative lesions in infective endocarditis: Clinical implications. *Circulation* 1980; 61:374-80.
6. Takeda P et al. Two-dimensional echocardiography in infective endocarditis: Early and late diagnostic, therapeutic, and prognostic implications. *Circulation* 1980; 62:Suppl III:99. abstract.
7. Nasser FN. Embolism in infective endocarditis: Identification of high-risk group by two-dimensional echocardiography. *Circulation* 1980; 62:Suppl III: 100. abstract.
8. Wann LS et al. Echocardiography in bacterial endocarditis. *N Engl J Med* 1976; 295:135-9.
9. Mugge A et al. Echocardiography in infective endocarditis: Reassessment of prognostic implications of vegetation size determined by the transthoracic and the transesophageal approach. *J Am Coll Cardiol* 1989; 14:631-8.
10. Robbins MJ et al. Influence of vegetation size on clinical outcome of right-sided infective endocarditis. *Am J Med* 1986; 80:165-71.
11. Strom JA et al. Effect of vegetation size on the outcome of patients with infective endocarditis. *Circulation* 1982; 66:II-103.
12. Dillon JC et al. Echocardiographic manifestations of valvular vegetations. *Am Heart J*; 86:698-704.
13. Roberts WC et al. Right-sided valvular infective endocarditis. *Am J Med* 1972; 53:7-19.
14. Andriole VT et al. Candida endocarditis: Clinical and pathological studies. *Am J Med* 1962; 32:251-85.
15. Child JS et al. Non-invasive detection of fungal endocarditis. *Chest* 1979; 75:539-40.
16. Manolis AS et al. Echocardiographic and clinical correlates in drug addicts with infective endocarditis. *Arch Intern Med*; 148:2461-65.
17. Andy JJ et al. Echocardiographic observations in opiate addicts with active infective endocarditis. *Am J Cardiol* 1977; 40:17-23.
18. Robbins SL et al. Pathologic Basis of Disease. W.B. Saunders Co., 1984:583.
19. Pelletier LL et al. Infective endocarditis: In Harrison's Principles of Internal Medicine. Eleventh Edition. McGraw-Hill Book Co., 1987.

## Maryland Advertisers

☛ To advertise in **MMJ** call:

**Network Publications**  
**301-235-0500**



THE MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND PRESENTS:

# AMERICA'S MAGNIFICENT NATIONAL PARKS

**\$ 1895\*** **\$ 2365\***

LAND ONLY

BALTIMORE

You'll enjoy:

Bozeman, Montana • Yellowstone National Park •  
Jackson, Wyoming • Salt Lake City, Utah • Moab, Utah •  
Kayenta, Arizona • Grand Canyon, South Rim •  
Bryce Canyon, Utah • Zion National Park, Utah  
and Las Vegas, Nevada.

Departing August 5, 1991  
Returning August 19, 1991

Call for  
EARLY BIRD  
DISCOUNT

# CANADIAN NATIONAL PARKS NATURE SPECTACULAR

**\$ 1995\*** **\$ 2720\***

LAND ONLY

BALTIMORE

You'll enjoy:

Vancouver, British Columbia • Victoria, British Columbia •  
Kamloops, British Columbia • Jasper, Alberta •  
Banff, Alberta • Kelowna & the Okanagan Valley,  
British Columbia

Departing July 19, 1991  
Returning July 29, 1991

**Call NOW! TOLL-FREE 1-800-322-6677**

\* Per person based on double occupancy without the Vantage Travel Early Bird Discount. If either departure date does not fit into your travel plans please call for additional tour dates.

☐ **Yes**, Please send me more information on The Medical and  
Chirurgical Faculty of Maryland National Parks tours!

Name \_\_\_\_\_  
Street \_\_\_\_\_ Apt. \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_  
Zip \_\_\_\_\_ Telephone ( ) \_\_\_\_\_

I'm not interested in the Medical and Chirurgical  
Faculty of Maryland National Parks tours, but I'd like  
more information on:

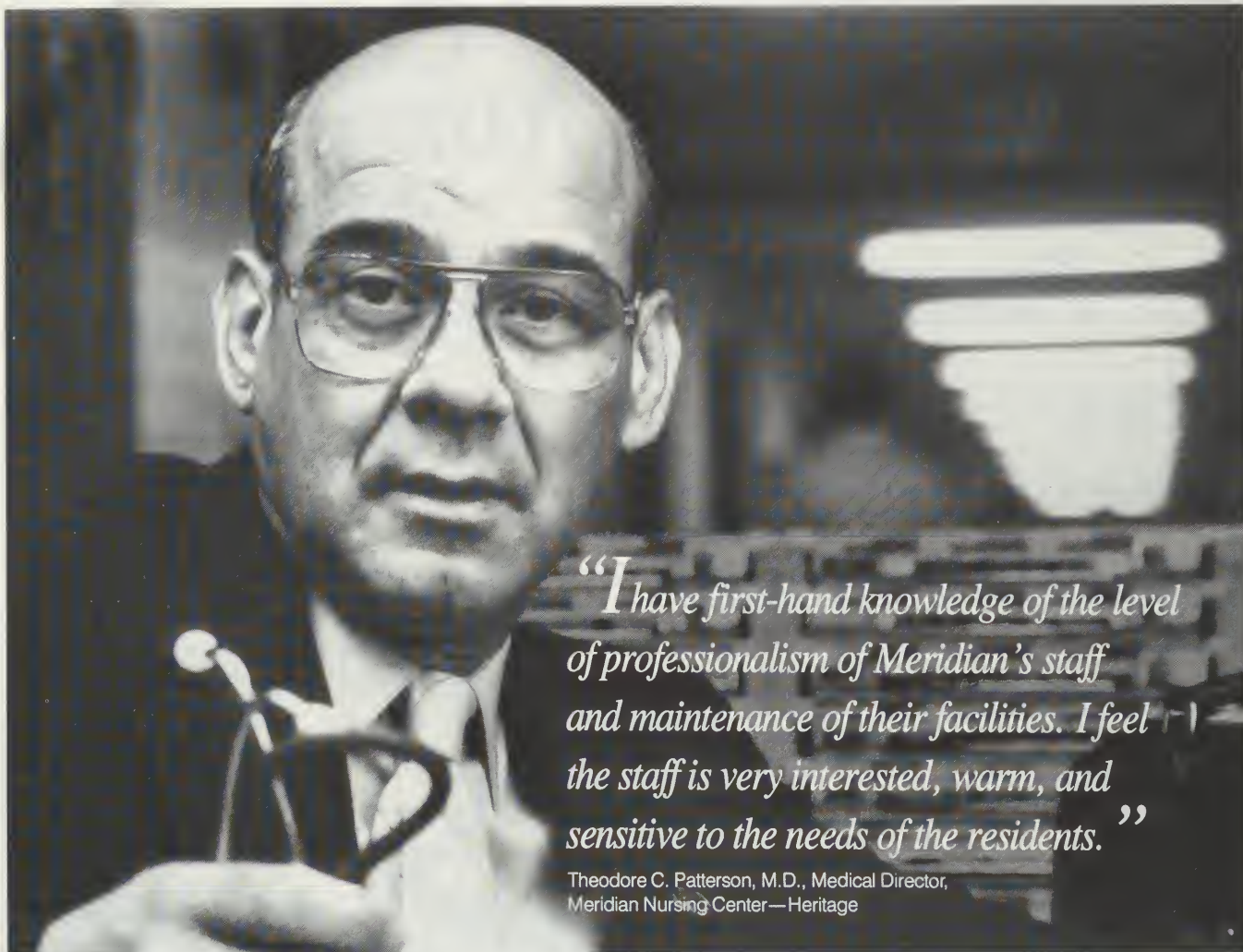
- |  |   |
|--|---|
| <input type="checkbox"/> The South Pacific | <input type="checkbox"/> Mexican Riviera                |
| <input type="checkbox"/> Latin America     | <input type="checkbox"/> Amazon Cruise                  |
| <input type="checkbox"/> Canadian Rockies  | <input type="checkbox"/> Exotic Far East                |
| <input type="checkbox"/> Caribbean         | <input type="checkbox"/> Alaska Cruise                  |
| <input type="checkbox"/> Polynesia Cruise  | <input type="checkbox"/> Scandinavia &<br>Russia Cruise |
| <input type="checkbox"/> Scandanavia       | <input type="checkbox"/> Around The World               |
| <input type="checkbox"/> Galapagos         | <input type="checkbox"/> New England /<br>Canada Cruise |
| <input type="checkbox"/> Russia            |   |

Please check appropriate boxes:

- |                         |                                      |                                      |                                       |                                     |                              |
|-------------------------|--------------------------------------|--------------------------------------|---------------------------------------|-------------------------------------|------------------------------|
| I plan to travel        | <input type="checkbox"/> 1991        | <input type="checkbox"/> 1992        | <input type="checkbox"/> 1993         |                                     |                              |
| My age is               | <input type="checkbox"/> Under 50    | <input type="checkbox"/> 50-59       | <input type="checkbox"/> 60-69        | <input type="checkbox"/> 70-79      | <input type="checkbox"/> 80+ |
| Length of Travel        | <input type="checkbox"/> -7 nights   | <input type="checkbox"/> 7-10 nights | <input type="checkbox"/> 11-14 nights | <input type="checkbox"/> 15+ nights |                              |
| Type of Travel I prefer | <input type="checkbox"/> Cruise Only | <input type="checkbox"/> Land Only   | <input type="checkbox"/> Both         |                                     |                              |

9533AD  
22459

**RETURN TO: VANTAGE TRAVEL SERVICE • 111 CYPRESS STREET  
BROOKLINE, MA 02146 • ATTENTION: LORRIE WRIGHT**



*"I have first-hand knowledge of the level of professionalism of Meridian's staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents."*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer's patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there's our full-time activity directors, social workers, and dieticians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





---

# Rocky Mountain Spotted Fever: Often a Diagnostic Dilemma

---

Christopher deBorja MD and Victor R. Hrehorovich MD

---

*Dr. deBorja is a member of the house staff and Dr. Hrehorovich is the Director of the Department of Medicine, Harbor Hospital Center, Baltimore, MD.*

---

*Prompt treatment with tetracycline or chloramphenicol is the single most important therapeutic intervention in patients diagnosed with Rocky Mountain spotted fever.*

---

**R**ocky Mountain spotted fever (RMSF) was first described as a tick-borne illness in 1906 by Howard Ricketts who was doing research in Montana. He died in 1910 of typhus, succumbing to the genus that bears his name. The *Rickettsia rickettsii* is a .2 x .2 x .3 micron, obligate intracellular parasite, containing both deoxyribonucleic acid (DNA) and ribonucleic acid (RNA). Intracellular proliferation can occur in both the nucleus and cytoplasm.<sup>1</sup> The disease most commonly occurs from April to October. In 1981, there were 1,170 cases of RMSF reported to the Centers for Disease Control (CDC). This has decreased to 603 cases in 1989, with an incidence of 0.25 per 100,000 persons. The state having the greatest number of cases in 1989 was North Carolina with 118. Maryland had only one CDC-reported case in that year. The greatest increase from the previous year occurred in New Jersey and Pennsylvania. Males made up 63 percent of the cases; 58 percent of the cases had had a positive tick exposure within fourteen days of symptoms. The triad of fever, headache, and rash was found in 49 percent of the cases. The case fatality rate was highest in those over twenty years of age (1.5 percent).<sup>2</sup> The overall low incidence of the disease and the often atypical presentations provide an interesting diagnostic and therapeutic dilemma.

## Case Presentation

This was the first Harbor Hospital Center admission for this sixty-eight-year-old white female complaining of fever of one-week's duration. The patient had a past medical history significant for right leg embolectomy secondary to an automobile accident, and a dilation and curettage (D&C). The patient stated that she had been in her baseline state of health until approximately one week prior to admission, when she began experiencing "off and on" fever, weakness, and loss of appetite. These symptoms continued for the next several days with increasing weakness and occasional dizziness. She denied cough, sweats, chills, abdominal pain, nausea, vomiting, diarrhea, headache, photophobia, arthralgias, myalgias, stiff neck, dysuria, pyuria, or rashes. It was noted

that her granddaughter, with whom she lived, had been admitted to this hospital one day earlier for possible RMSF with a positive tick exposure.

There were no preadmission medications used, nor allergies described. The patient had been widowed two years previously and lived with her son and granddaughter in a wooded rural area. The family had numerous pets who had the run of the property. The patient denied any recent tick bite or infestation. She was a retired cleaning lady without an alcohol or tobacco history. Her family history was significant only for diabetes mellitus in her mother.

On admission to the emergency room, her blood pressure (BP) was 90/60 mm Hg, pulse was 140 beats per minute (bpm), and temperature was 97.2° F. Approximately one-half hour later, her temperature had increased to 102.8° F., with her BP decreasing to 76 mm Hg systolic, requiring infusion of 5 percent dextrose in .45 percent saline (100 cc/h) to maintain her pressure at that level.

On examination, her BP was 76/48 mm Hg with a pulse of 96 bpm (supine), changing to 66/44 mm Hg and 104 bpm (erect); respirations were 22 per minute with a temperature of 102.8° F. The skin was warm and dry with decreased turgor and small petechiae on the feet and dependent portion of the calves. No other rash was noted. No lymphadenopathy was detected. The head was normal, sclera were clear, and the conjunctiva were pink and non-injected. Fundi showed flat discs without significant pathology. The ears, nose, and throat were normal except for a somewhat dried mucosa with white-coated tongue and a few petechiae on the roof of the mouth. The neck was supple, without jugular vein distension (JVD) or bruits. Lungs were clear. The point of maximal impulse (PMI) was not palpable, with a normal S1/S2, a faint S4, and a II/VI systolic murmur heard at the apex. The abdomen and rectal examinations were normal. The extremities were without edema, cyanosis, or clubbing. The patient was alert and oriented to time and place without any neurological deficit.

Urinalysis showed a specific gravity of 1.020, a pH of 5.0, protein was 2+, hemoglobin (Hb) was trace, with occasional white blood cells (WBC) and amorphous urate. The hematocrit (Hct) was 48.7 percent, manual platelet count was 25,000, and the white count was 9,900 (20 stabs, 67 segmented cells, 10 lymphocytes, and 3 monocytes). The mean corpuscular volume (MCV) was 93.7  $\mu\text{m}^3$ , the mean corpuscular hemoglobin (MCH) was 30.9 picograms per red cell, the prothrombin time (PT) was 12.7 seconds, and the partial thromboplastin time (PTT) was 33.0 seconds. The fibrinogen level was 150 mg/dl and the fibrin degradation products were 36  $\mu\text{g}/\text{ml}$ . Glucose was 187 mg/dl, the urea nitrogen was 35 mg/dl, sodium (Na) was 137 mEq/l, potassium (K) was 4.4 mEq/l, chlorine (Cl) was 96 mEq/l, and the carbon dioxide ( $\text{CO}_2$ ) was 23 mEq/l. The chest x-ray was normal. Arterial blood gases on room air showed a pH of 7.50,  $\text{pCO}_2$  of 22 mm Hg,  $\text{pO}_2$  of 88 mm Hg, and bicarbonate ( $\text{HCO}_3$ ) of 17

mEq/l. An electrocardiogram (EKG) showed sinus tachycardia with anteroseptal ST-T changes. These changes were consistent with myocardial infarction of undetermined age and possible current of injury.

The patient was admitted to the Coronary Care Unit for: (1) possible anteroseptal myocardial infarction (MI), (2) sepsis of unknown etiology -- possible RMSF, (3) dehydration and hypotension with orthostatic changes, and (4) thrombocytopenia. The patient received vigorous rehydration with 5 percent dextrose in .09 percent saline. Blood and urine were sent for culture and intravenous (IV) ampicillin, tetracycline, and gentamicin were started.

On the second hospital day, the patient's temperature had increased to 104.4° F. and her respirations were increased to 36 per minute. Her room air arterial blood gas (ABG) showed a pH of 7.35,  $\text{pCO}_2$  of 20 mm Hg,  $\text{pO}_2$  of 77 mm Hg, and a  $\text{HCO}_3$  of 11 mEq/l. Her white blood count (WBC) had increased to 16,800 with 42 stabs. Na, K, Cl, and calcium (Ca) were normal at that time. Her blood urea nitrogen (BUN) had increased to 36 mg/dl, aspartate aminotransferase (AST) to 358 U/l, alanine aminotransferase (ALT) to 112 U/l, and lactate dehydrogenase (LDH) to 522. A central line was placed for better IV access. Her hypotension was refractory to IV fluid therapy and dopamine was needed to support her BP above 90 mm Hg systolic. Ampicillin and gentamicin were discontinued and Primaxin and tetracycline were started with acetaminophen and a cooling blanket to reduce her temperature to 99.0° F. She developed increasing metabolic acidosis that required administration of Na  $\text{HCO}_3$  in her IV fluids. A Swan-Ganz catheter was placed with an opening pulmonary capillary wedge pressure (PCWP) of 7 to 9 mm Hg. A computed tomography (CT) scan of the abdomen revealed no evidence of significant abnormality. The patient exhibited a grand mal seizure lasting approximately one to two minutes. The patient was treated with IV Dilantin, and a CT of the head was obtained which revealed no definite abnormality. A second seizure occurred in the late afternoon and additional IV Dilantin was administered. A lumbar puncture was performed revealing clear yellow cerebrospinal fluid (CSF) with six WBCs (33 percent polymorphonuclear leukocytes, 47 percent lymphocytes, and 20 percent monocytes). The protein was 167 mg and the glucose was 137 mg/dl. Her platelet count had decreased to 22,000, and ten units of platelets were administered, raising the level to 54,000. By the end of the second hospital day, the patient had become increasingly lethargic and tachypneic, and continued to spike temperatures in excess of 104° F. Preliminary cultures were negative, so additional specimens were sent for cryptococcal antigens, RMSF titers, and Lyme titers. Antibiotic coverage was changed to chloramphenicol, ceftriaxone, and ampicillin after an infectious disease consult was obtained.

By the third hospital day, the patient remained lethargic and minimally responsive. Her BP had increased to 112/58 mm Hg and she was weaned from



dopamine. The patient's temperature had decreased to 98.7° F. with a maximum temperature of 100.4° F. Her WBC had increased to 22,900 and her Hct dropped to 34. Her Dilantin level was 11.8 and her pCO<sub>2</sub> had increased to 18. Serial creatine phosphokinase (CPK) and LDH isoenzymes returned negative for MI, and serial ECGs showed persistent anteroseptal ST elevations without evolutionary changes. On the following day, the patient's albumin had decreased to 1.8 with developing 2+ peripheral edema; her WBC had decreased 18,000 with her BP remaining stable, and a maximum temperature of 100.6° F. A repeat lumbar puncture was obtained showing 20 WBCs (78 percent polymorphonuclear leukocytes, 13 percent lymphocytes, and 9 percent monocytes), the protein was 117, and the glucose was 57 mg/dl. IV albumin was administered and tube feedings were begun. By the following day, the albumin had increased to 2.4, the WBC had decreased to 7,000, the platelets to 51,000, and the pCO<sub>2</sub> to 29 mEq/l. Her temperature remained in the normal range and she became more alert and oriented. By the sixth hospital day, she began taking oral nutrition and her peripheral edema had improved. IV fluids were discontinued, RMSF titers were positive at a level of 1:1,024, and only chloramphenicol was continued. She continued to improve and was transferred to the step-down unit on the eighth hospital day. She continued to remain afebrile with stable vital signs, and chloramphenicol was discontinued on the ninth hospital day.

Follow-up CT scan of the head showed right sphenoid sinusitis and an ear, nose and throat (ENT) consult was obtained. The patient was placed on oral tetracycline. The remaining serological and culture studies returned negative.

On the sixteenth hospital day, the patient's BP had dropped to 88/60 mm Hg with a temperature of 100.6° F. Her WBC was 5,700 and subsequent urine cultures returned with 100,000 colonies/cc of *Pseudomonas*. She was placed on appropriate antibiotic coverage and improved quickly. She continued to do well, ambulation was increased, and she was discharged home in good condition on the twenty-sixth hospital day.

### Discussion

Rocky Mountain spotted fever is a disease caused by tick-borne *Rickettsia rickettsii*. The mean incubation period is six to seven days but may range from one to ten days. The characteristic rash is macular in appearance, less than 4 millimeters in size, and usually appears between the third and fifth days of illness. Most patients present with a rash on the soles or palms. Only when treatment is delayed, as in our patient, does the rash become petechial.<sup>3</sup> The rash, however, can be absent in up to 16 percent of RMSF patients. The usual patient presentation of RMSF is felt to be fever, rash, and history of tick bite or exposure; however, only 3 percent of patients manifest this triad during the first three to four days of illness. Since most physicians

have not seen a case of RMSF, misdiagnosis is often the rule. When atypical signs and symptoms present, the delay in diagnosis and treatment can prove fatal. *Rickettsia rickettsii* appears to have a unique mechanism for causing cell injury. Infected cells undergo changes in the membrane framework of endoplasmic reticulum.<sup>1</sup> Resulting endothelial damage leads to widespread vasculitis. This can cause injury to multiple organ systems, with possible presentations ranging from acute appendicitis to myocardial infarction.<sup>4,5</sup> Studies of RMSF by Helmick et al showed abdominal pain as the initial presentation 30 percent of the time.<sup>6</sup> In a study of RMSF fatalities, death was due to a delay in diagnosis attributed to an absent or delayed appearance of rash, absent tick exposure, or atypical symptom presentation.<sup>7</sup> RMSF fatalities range from 3 percent to 8 percent in most studies.<sup>8</sup> Factors associated with the greatest mortality risk include: (1) male gender, (2) age greater than thirty years, (3) Black race, (4) central nervous system (CNS) involvement, (5) renal failure, (6) cardiac failure, (7) absence or late appearance of rash, (8) inappropriate antibiotic coverage, or (9) no tick exposure history.<sup>9</sup> In our patient, the development of confusion, lethargy, elevated liver functions, progressive uremia, hypotension, and initiation of antibiotic therapy one week after the onset of symptoms are considered poor prognostic signs. The fact that our patient survived is unusual since the RMSF fatality study done by Hattwick showed a 64 percent fatality rate when antibiotics were started six days after the onset of symptoms.<sup>8</sup> Many of the clinical features of this case study were typical for RMSF (i.e., fever, headache, thrombocytopenia), but the history of possible tick exposure provided the greatest support for empiric RMSF coverage.

There can be a vast number of differential diagnoses due to the multitude of potential atypical RMSF presentations. Chest pain with ECG changes has been described,<sup>5</sup> as has cholecystitis and appendicitis.<sup>6,10</sup> The more common differential diagnoses would include meningococemia, atypical pneumonia, measles, viral syndrome, mononucleosis, staphylococcal sepsis, toxic shock syndrome, overwhelming pneumococcal sepsis in an asplenic patient, syphilis, leptospirosis, typhoid fever, drug fevers, and rheumatic fever. In fact, RMSF should be in the differential diagnosis of any obscure febrile illness since early treatment of RMSF is necessary to ensure survival (Table).

Prompt treatment with administration of either tetracycline or chloramphenicol is the single most important therapeutic intervention. Other antimicrobial agents have no effect on the *Rickettsia rickettsii*. The study done by Hattwick et al<sup>8</sup> stated that death prior to four days of symptoms was exceedingly unusual, even without antibiotic therapy. This gives the physician some time to ponder a potentially difficult diagnostic dilemma. Tetracycline is given in a dose of 25-50 mg/kg/day, but not to children less than nine years old, for whom chloramphenicol is recommended. The chloramphenicol dose is 50 mg/kg/day. The patient's

## Table. Criteria for Clinical Diagnosis<sup>3</sup>

Laboratory criteria for clinical diagnosis as proposed by the CDC include:

1. Four-fold or greater rise in antibody titer to the spotted fever group antigen by immunofluorescent antibody (IFA), complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination (IHA) tests.
2. Single titer  $\geq 1:64$  by IFA or  $\geq 1:16$  by CF
3. Positive immunofluorescence of skin lesion obtained by biopsy or organ tissue at autopsy.
4. Isolation of *Rickettsia rickettsii*.

Probable confirmation:

1. Four-fold rise in titer or a single titer  $\geq 1:320$  by Proteus OX-19 or OX-2.
2. Single titer  $\geq 1:128$  by LA, IHA, or MA.

temperature usually returns to normal on the third or fourth day of appropriate antibiotic therapy with a concomitant improvement in the patient's clinical picture. The RMSF disease process is a cascade;<sup>11</sup> as the disease progresses beyond four days of symptoms without therapy, death becomes more likely, punctuating the need for prompt, appropriate antibiotic therapy. This raises some delicate questions. Is it likely physicians will make the diagnosis on first presentation? If not, should tetracycline and chloramphenicol (both having potentially serious side effects) be administered with even the slightest possibility of RMSF? As in many other clinical circumstances, this

disease requires the best intuitive judgment of a well-informed physician.

## References

1. Silverman DJ and Santucci LA. Potential for free radical-induced lipid peroxidation as a cause of endothelial cell injury in Rocky Mountain spotted fever. *Infect Immun* 1988; 56(12):3110-15.
2. CDC. Rocky Mountain spotted fever - United States, 1989. *MMWR* 1990; 39(17):281-4.
3. Maryland State Department of Health and Mental Hygiene. Rocky Mountain spotted fever. *Md Med J* 1988; 37(4):253-6.
4. Horney LF and Walker DH. Meningoencephalitis as a major manifestation of Rocky Mountain spotted fever. *South Med J* 1988; 81(7):915-8.
5. Kubala G and Losh DP. Rocky Mountain spotted fever presenting with chest pain and electrocardiogram ischemic changes. *J Fam Pract* 1989; 28(5):581-90.
6. Davis AE Jr. and Bradford WD. Abdominal pain resembling acute appendicitis in Rocky Mountain spotted fever. *JAMA* 1982; 247:2811-12.
7. Helmick CG and Bernard KW. Rocky Mountain spotted fever: Clinical, laboratory, and epidemiological features of 262 case. *J Infect Dis* 1984; 150:480-8.
8. Hattwick MAW, Retailliau H and O'Brien RJ. Fatal Rocky Mountain spotted fever. *JAMA* 1978; 240:1499-1503.
9. Lee SMK. Viscerotropic Rocky Mountain spotted fever in southeastern Texas: Report of survivor with atypical manifestations. *South Med J* 1989; 82(5):640-2.
10. Walker DH, Lesesne HR and Varma VA. Rocky Mountain spotted fever mimicking acute cholecystitis. *Arch Intern Med* 1985; 145:2194-96.
11. Morrison RE, Lancaster DJ and Smith WR. Rocky Mountain spotted fever (American Tick Typhus). *J Tenn Med Assoc Nov.* 1988; 691-3.

## No paperwork. No hassle. No kidding.

Electronic claims processing reduces your paperwork, verifies your claims in 24 hours and saves you money every time you file a claim. If you use a computer for billing, LifeCard Provider Network can link your system with most major insurance carriers. If you're not currently using a computer, we'll help you get started.

LifeCard links your office with:

Aetna Life  
Benefit Trust  
Blue Cross & Blue Shield of MD  
Cigna  
Confederation Administration  
Confederation Life  
Equicor  
Great Southern Life

Life of Georgia  
Lincoln National  
Maryland Medical Assistance  
Medicare B  
Metropolitan Life  
Mutual of Omaha  
National Capital BC/BS

Pacific Mutual  
Philadelphia American Life  
Philadelphia Life Insurance  
Principal Mutual  
State Mutual Life  
The New England  
Willse

Join the more than 1200 Maryland providers who already enjoy the benefits of paperless claims handling. Call your LifeCard marketing representative today.

**301-494-4800**

**Provider Assistance and Relations**







## Which Box Would You Rather Deposit Your Insurance Reimbursements In?

If you process your claims through the mail, it takes an average of two months before your reimbursements make it to the bank.

And that can really put you in a box in terms of cash flow.

But not if you join the more than 1800 physicians who are now using HCS electronic claims systems. On the average, they receive payments in days, instead of months. Reason enough to consider using our custom designed systems.

What's more, our systems are labor savers. Stacks of claims that used to take weeks to process by mail can be sent through our claims

network in a matter of hours. Saving you enormously in administrative time. Not to mention postage.

And since HCS has the backing of a billion dollar health care organization, you can depend on us for long term support, service, and solutions as your office needs change.

Call Toll-Free 1-800-543-6711 for more information. Because in rain, snow, sleet or hail, we can deliver insurance reimbursements faster.



**Health Communication Services, Inc.**

*You'll Be Overwhelmed By Your  
Cash Flow, Not Your Overhead.*

# Continuing...

For over fifteen years, the Med Chi Agency has been serving the needs of Maryland physicians...*your* needs, with unrivaled commitment and dedication. And as the Agency has grown, so has your trust...in us, in our products and in the way we do business with you.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial options. Among these are:



Professional Liability Insurance (Malpractice)



Personal insurance, including homeowners, auto, boat and recreational vehicle coverage and personal umbrella insurance.



Office insurance, including medical equipment, medical records, computer equipment, account receivables, workers compensation, business auto and employee dishonesty



Financial and estate planning, specifically tailored to the medical professional.



Individual and group, life, health and income protection.



Qualified and non-qualified Retirement Planning

## ...A Commitment To Service



**THE MED CHI AGENCY**  
1204 Maryland Avenue  
Baltimore, Md. 21201-5583  
(301) 539-6642  
1-800-543-1262 (in Maryland)  
FAX (301) 752-5421



---

# Rhabdomyolysis and Acute Renal Failure: A Review of Two Cases

---

Marian Benner MD and Daniel Rossler MD

---

*Dr. Benner practices Emergency Medicine at Union Hospital of Cecil County in Elkton, MD and Dr. Rossler is a member of the house staff at Harbor Hospital Center, Baltimore, MD.*

---

*A possible complication of renal failure induced by rhabdomyolysis should be recognized in patients presenting with injuries involving muscle damage.*

---

**R**habdomyolysis is an acute, potentially fatal disease caused by destruction of skeletal muscle and evidenced by myoglobulinemia and myoglobinuria.<sup>1</sup> Muscle damage may be due to toxic, metabolic, infectious, or traumatic causes.<sup>2</sup> It is accepted that myoglobin in the circulation can lead to renal failure. Rhabdomyolysis and myoglobinuria are often due to extensive trauma. There are, however, non-traumatic causes of rhabdomyolysis, such as muscle ischemia induced by arterial insufficiency or drug overdose with resultant coma and muscle compression.<sup>1</sup> Muscles working under increased oxygen demands (exercise, seizures) or decreased energy production (hypokalemia, hypophosphatemia) can also result in muscle destruction. Tubular obstruction due to myoglobin precipitation and cast formation, along with nephrotoxic muscle breakdown products, may cause renal failure.

We present two cases of rhabdomyolysis-induced renal failure. In one case, muscle damage was due to a compression syndrome/crush injury. In the other, destruction was due to hyperthermia.

## Case Presentation

A.H. is a forty-five-year-old male who presented to the emergency room in a semicomatose state after being found lying on his left side for two days. On admission, he was hypotensive, oliguric, and had a left hemiplegia. He developed a compressive neuropathy of his left lower extremity, along with extensive muscle damage. During his hospital stay, he had persistent oliguria with hyperkalemia necessitating the institution of peritoneal dialysis. Laboratory tests revealed a blood urea nitrogen (BUN) of 21, a potassium level (K<sup>+</sup>) of 7.4, an hematocrit (Hct) of 55, a phosphate level (PO<sub>4</sub>) of 8.5, and a calcium level (Ca<sup>++</sup>) of 5.3. The extent of his renal failure was manifested by a rise in BUN to 117 and creatinine to 11.1. His creatinine phosphokinase (CPK) was 750,000, and urine and blood were positive for myoglobin. After three weeks of peritoneal dialysis, the patient slowly regained renal function. Two months after admission, he had a BUN of 22 and a creatinine of 1.5 (Figure 1).

## Case Presentation

H.R. is a thirty-two-year-old male who was brought to the emergency room unresponsive after an overdose of cocaine. He had a temperature of 105° F., severe muscle rigidity, and oliguria. Laboratory tests revealed a BUN of 38, a K<sup>+</sup> of 4.3, and an Hct of 43. The patient had had no urine output in twenty-four hours and

peritoneal dialysis was started. His CPK at that time was greater than 12,000, serum myoglobin was greater than 1,250, and urine myoglobin was 200. At the worst stage of his renal failure, he had a BUN of 90 and a creatinine of 15, with Ca<sup>++</sup> of 8.4 and PO<sub>4</sub> of 6.4. He required three weeks of peritoneal dialysis. Two months after treatment he had a BUN of 15 and a creatinine of 1.9 (Figure 2).

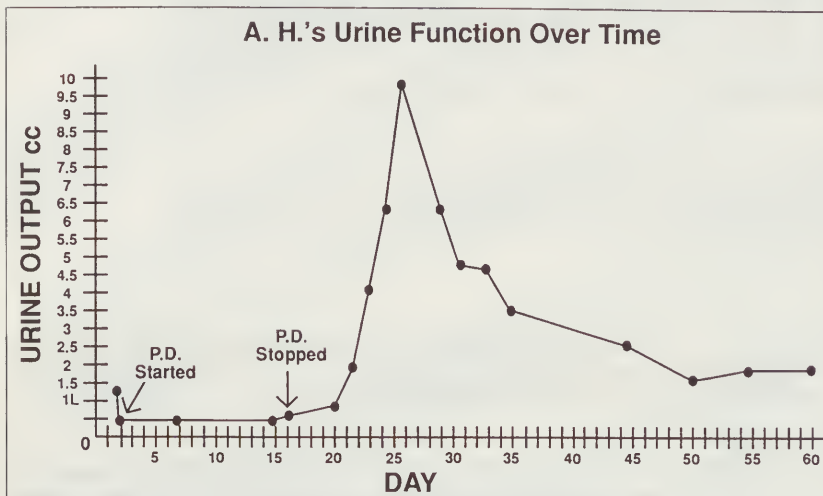


Figure 1. A.H.'s urine function over time

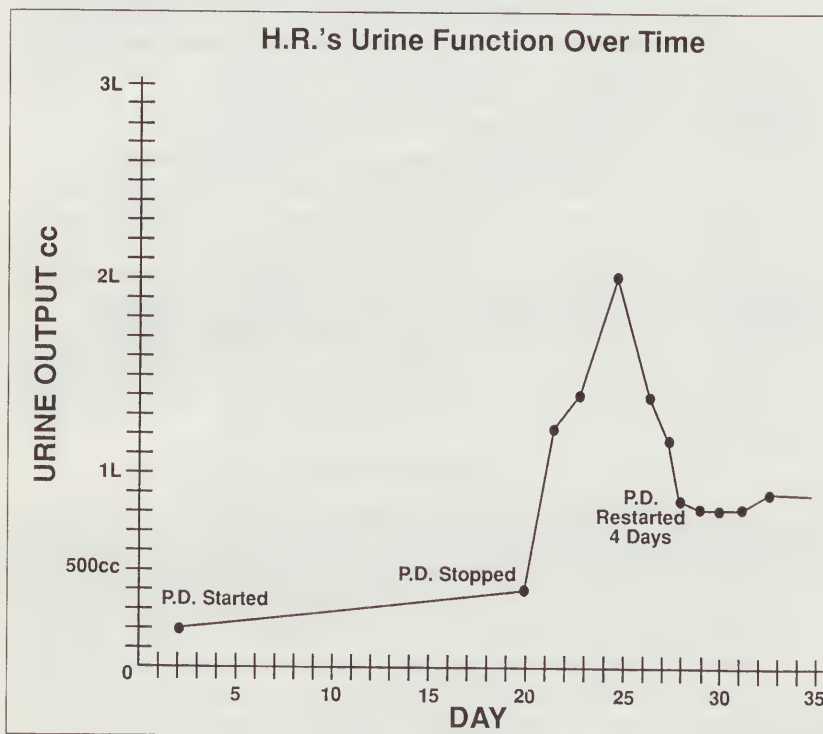


Figure 2. H.R.'s urine function over time

In reviewing these two cases, it is apparent that rhabdomyolysis is capable of producing severe renal toxicity. Renal failure progressed rapidly in both of these patients, necessitating peritoneal dialysis. The pathogenesis of renal failure caused by rhabdomyolysis is unclear. When serum myoglobin is high, particularly in cases where there is extensive muscle destruction, it becomes toxic to the kidney, primarily through tubular obstruction by myoglobin casts. Other factors contributing to the insult are toxin-induced vasoconstriction and increased permeability of the glomerular basement membrane. Hypovolemia and aciduria also enhance the development of renal injury. In addition to increased BUN and creatinine, Ca<sup>++</sup> and PO<sub>4</sub> levels rise in the serum.

In animal studies,<sup>3</sup> it has been shown that aciduria damages renal tissue by trapping myoglobin acutely within the tubules, and that bicarbonate (HCO<sub>3</sub>) protects the kidney by increasing urinary myoglobin solubility. The mechanism of cocaine injury in rhabdomyolysis has been postulated to be due to increased muscle activity and compression, hyperthermia, and vasospasm with muscle ischemia.

In conclusion, the possible complication of renal failure induced by rhabdomyolysis should be recognized in patients presenting with injuries involving muscle damage.

## References

1. Pogue VA, Nurse HM. Cocaine-associated myoglobinuric renal failure. *Am J Med* 1989; 86(2):183-6.
2. Hamilton RW, Hopkins MB, Shihabi ZK. Myoglobinuria, hemoglobinuria, and acute renal failure. *Clin Chem* 1989; 35(8): 1713-20.
3. Zager RA. Studies of mechanisms and protective maneuvers in myoglobinuric acute renal injury. *Lab Invest* 1989; 60(5):619-29.



---

# Correlation of Holter Monitoring and Left Ventricular Function to Signal-averaged Electrocardiogram after Myocardial Infarction

Jorge Perez-Alard MD, Pankaj R. Desai MD,  
Ramanathe Sirithara MD, and Chris Papadopoulos MD

---

*From the Harbor Hospital Center, Baltimore, MD, where Dr. Perez-Alard is a Senior Resident, Department of Medicine; Dr. Desai is a member of the house staff; Dr. Sirithara is an Attending in the Division of Cardiology; and Dr. Papadopoulos is the Chief of Cardiology, as well as a Clinical Associate Professor in the School of Medicine, University of Maryland.*

---

*Holter monitoring, in combination with estimates of left ventricular function, helps to identify subgroups of patients in the immediate post-myocardial infarction period in whom late potentials may be present on signal-averaged ECG.*

---

About 1.5 million Americans will suffer a myocardial infarction (MI) this year, and approximately 6 to 10 percent of the survivors will experience sudden cardiac death within the first year. However, the risk of developing malignant ventricular arrhythmias will be even higher in certain subgroups.<sup>1,2</sup> Patients in the post-myocardial infarction period are at a high risk for re-entrant ventricular arrhythmias associated with sudden death.<sup>1,3</sup> Until recently, there have been no absolutely reliable means by which to noninvasively assess those patients at risk, and determine the appropriateness of further diagnostic evaluation and therapy. Signal-averaged electrocardiography has emerged as a very useful tool for identifying such patients at risk.<sup>4,5</sup> The signal-averaged electrocardiogram (SAECG) is capable of decreasing the level of noise contaminating the surface electrocardiogram, allowing for high frequency, low amplitude (HFLA) signals (i.e., late potentials (LP)) to be identified at the terminal portion of the QRS complex (Figure 1).<sup>4,5</sup>

Late potentials are delayed and inhomogeneous conduction through a scarred myocardium, thought to represent the arrhythmogenic substrate for re-entrant ventricular arrhythmias (Figure 2).<sup>1,2</sup> Several investigators have demonstrated a higher incidence of abnormal signal-averaged variables in those post-MI patients who experience sudden death or malignant arrhythmias.<sup>1,3,6-8</sup>

## Purpose

The purpose of this study was to correlate Holter monitoring and left ventricular function to late potential analysis on the SAECG of patients in the post-myocardial infarction period.

## Methods

Twenty-five patients with acute myocardial infarction were studied prospectively. The patients had been admitted to the Har-

bor Hospital Center coronary care unit between September 1989 and March 1990.

The diagnosis of acute MI was based on the occurrence of at least two of the following three criteria: (1) prolonged chest pain compatible with ischemia, (2) serial elevations of creatine phosphokinase (CPK)-MB isoenzyme levels, and (3) evolving ECG changes consistent with Q or non-Q infarction. Within a week of admission, SAECG, twenty-four-hour Holter-monitoring (HM), and left ventricular function, either by echocardiogram or radionuclide ventriculography, were obtained. Signal-averaging was performed at the bedside with the patient in the supine position according to standard methods using the Marquette, MAC 12/15, High Resolution Acquisition Module and Analysis software.<sup>1,8</sup> The Frank Lead Orthogonal system was utilized for lead placement, employing seven silver-silver chloride bipolar electrodes in the horizontal (X), vertical (Y), and sagittal (Z) planes. Leads are placed along the torso at the level of the fifth intercostal space, the back of the neck, and the left leg (Figure 3).<sup>1,4,5</sup> Approximately 250 repetitive QRS complexes were collected, preamplified, filtered, and amplified again. A vector magnitude (VM) was generated for each point of the averaged signal as  $V = \sqrt{X^2 + Y^2 + Z^2}$ . Data were then analyzed at high pass filtering of 25 and 40 hertz (Hz), and low pass filtering of 250 Hz, then recorded on floppy disk for further processing. Quantitative signal-averaged variables for the X, Y, and Z

vectors were calculated by the computer and visually inspected for abnormalities according to the criteria of Gomes et al (Table 1).<sup>7</sup> The three variables analyzed were: (1) the total filtered QRS complex duration in milliseconds (msec), (2) the root-mean-square voltage during the terminal 40 msec of the filtered QRS complex in microvolts, and (3) the duration of the HFLA signals under 40 microvolts, in milliseconds. A study was considered to be positive if one or more abnormal variables were present (Figure 4).

Results

Of the twenty-five patients studied, thirteen (52 percent) had an abnormal SAECG at 25 Hz and seven (28

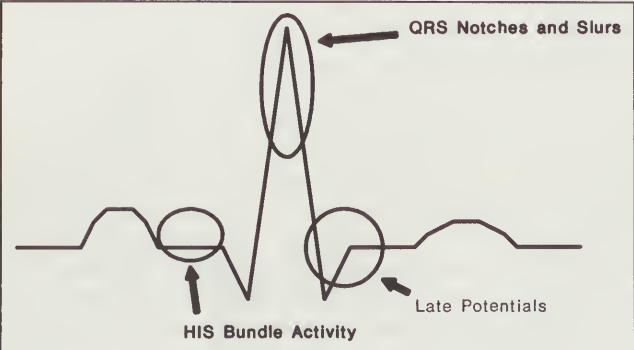


Figure 1. Location of high frequency, low amplitude (HFLA) information within the ECG. (Reprinted with permission from Marquette Electronics, Inc.)

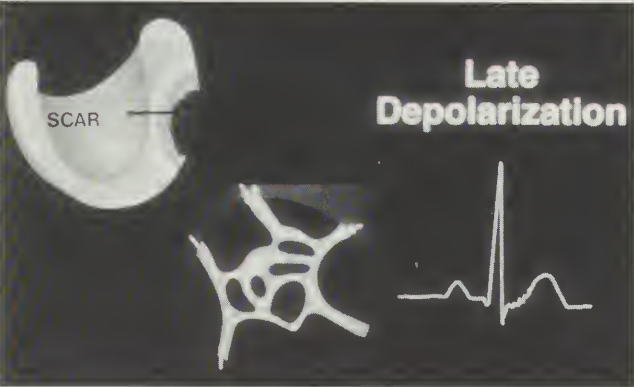


Figure 2. Late depolarization.

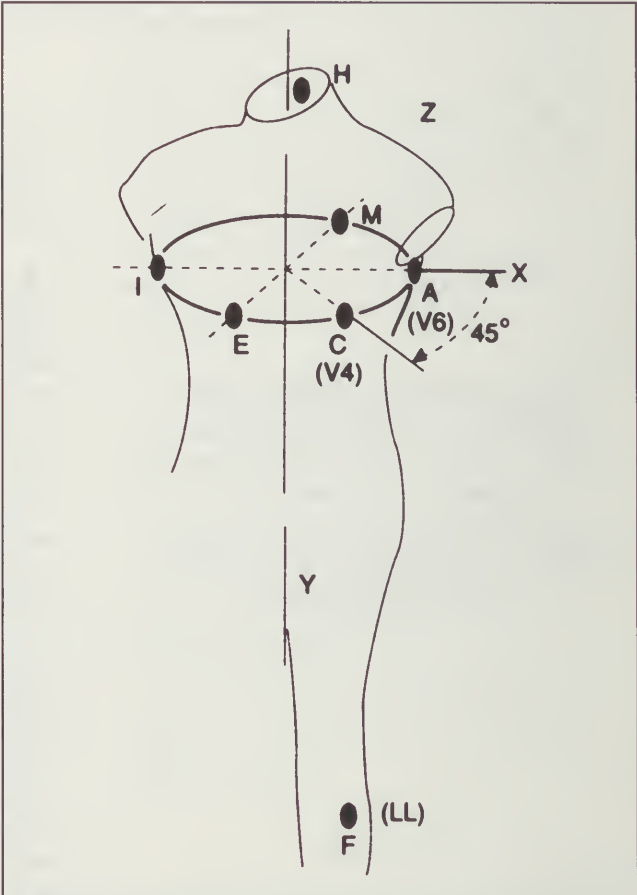


Figure 3. Frank leads are placed along the torso at the level of the fifth intercostal space, the back of the neck, and the left leg.

Table 1. Criteria Employed for Late Potential Identification\*

High Pass Filter Frequency (Hz)	QRS Duration (msec)	RMS-40 (uV)	IIFLA-40 (msec)
25	114	25	32
40	114	20	38

\* Gomes JA, Winters SL, Martinson M et al. The prognostic significance of quantitative signal-averaged variables relative to clinical variables, site of myocardial infarction, ejection fraction and ventricular premature beats: A prospective study. J Am Coll Cardiol 1989; 13:377-84.



percent) at 40 Hz (Table 2A). An abnormal ejection fraction, less than 40 percent, was observed in seven (28 percent). A positive Holter monitor result (high grade ventricular activity, Lown grade 2 or greater) was observed in six (32 percent) of our patients (Table 2B).

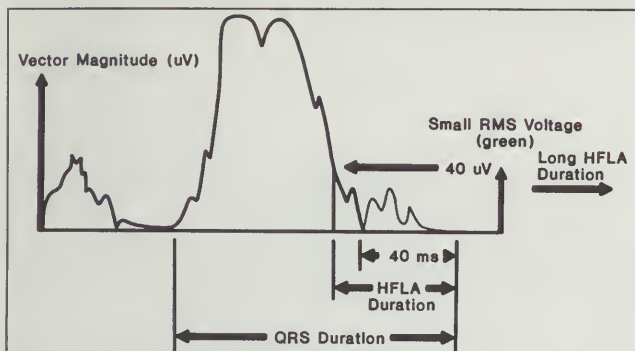


Figure 4. Late potentials patient.

(Reprinted with permission from Marquette Electronics, Inc.)

Table 2A. Results of SAECGs of Twenty-five Patients in the Immediate Post-myocardial Infarction Period

	25 Hz	40 Hz
SAECG (+)	13 (52%)	7 (28%)
QRS-D	11	6
HFLA-D	5	6
RMS-V	3	4

HFLA = high frequency, low amplitude; RMS-V = root-mean-square voltage

Table 2B. Results of Holter Monitoring (HM) and Estimates of Left Ventricular Function (ELVF)

ELVF	7/25 (28%)
(abnormal ejection fraction <40%)	
HM (Lown $\geq$ 2)	6/19 (32%)

Table 2C. Abnormal Variables Identified on the SAECG

Abnormal Variables	25 Hz	40 Hz
0	13	17
1	8	3
2	2	2
3	1	3
Rejected (Noise >1uV)	1	4

Table 3. Correlation of Late Potentials with Holter Monitoring and Estimates of Left Ventricular Function, Alone and in Combination

	Sensitivity	Specificity	+ Predictive Value	- Predictive Value	Diagnostic Accuracy
Holter Monitoring					
25 Hz	5/12 (42%)	5/6 (83%)	5/6 (83%)	5/12 (42%)	10/18 (56%)
40 Hz	3/6 (50%)	9/10 (90%)	3/4 (75%)	9/12 (75%)	12/16 (75%)
Estimates of Left Ventricular Function					
25 Hz	6/13 (46%)	10/11 (91%)	6/7 (86%)	10/17 (59%)	16/24 (67%)
40 Hz	2/6 (33%)	13/15 (87%)	2/4 (50%)	13/17 (76%)	15/21 (72%)
Holter Monitoring and Estimates of Left Ventricular Function					
25 Hz	11/24 (46%)	12/13 (92%)	11/12 (92%)	12/25 (48%)	23/37 (62%)
40 Hz	6/10 (60%)	22/28 (79%)	6/12 (50%)	22/26 (85%)	28/38 (74%)

Six Holter monitor results were not available for analysis, and five SAECGs were rejected due to a noise level above 1 microvolt. Most of the SAECGs identified as positive had only one abnormal variable present (Table 2C). Holter monitoring alone identified positive SAECGs with higher accuracy at 40 Hz high pass filtering, whereas estimates of left ventricular function alone had similar results at 25 Hz. Both tests, in combination, demonstrated the highest sensitivity, specificity, and positive and negative predictive value for being able to identify positive SAECGs. We note that the diagnostic accuracies did not achieve statistical significance (Table 3).

Gomes et al,<sup>6</sup> using the combination of Holter monitoring, ejection fraction, and SAECG, identified the subset of patients at highest risk for malignant arrhythmias or sudden cardiac death with a sensitivity of 100 percent and a specificity of 53 percent. Others have demonstrated SAECGs to have a lower sensitivity but a much higher specificity.<sup>5,9,10</sup> Our present study did not attempt to correlate late potentials to cardiac events, but to identify whether Holter monitoring or estimates of left ventricular function, alone or in combination, could predict late potentials on SAECG.

## Conclusion

We conclude that Holter monitoring, in combination with estimates of left ventricular function, helps to identify subgroups of patients in the immediate post-myocardial infarction period in whom late potentials may be present on SAECG. This combination of tests identified positive SAECGs with a sensitivity of 60 percent at 40 Hz, and a specificity and positive predictive value of 92 percent at 25 Hz. There was a negative predictive value of 85 percent and diagnostic accuracy of 74 percent at 40 Hz high pass filtering (Table 3).

We also conclude that both 25 and 40 Hz high pass filtering and 250 Hz low pass filtering are recommended when screening patients for late potentials with Holter monitoring or ejection fraction. We note that a larger study population is required for higher statistical correlation.

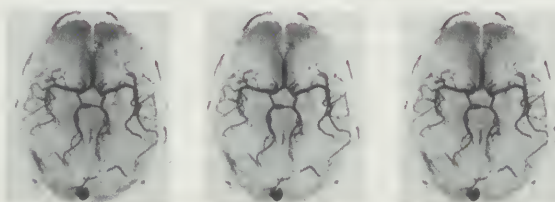
## References

1. Donofrio MT, Winters SL, Gomes JA. Late potentials on the signal-averaged ECG as a predictor of malignant arrhythmias and sudden death post-myocardial infarction. *Arrhythmia Clinics* 1989; 6:42-8.
2. Gottlieb CD. Signal-averaged ECG in post-MI patients. *Cardiology* 1990; 67-72.
3. Kuchar DL, Thorburn CW, Sammel ML. Prediction of serious arrhythmic events after myocardial infarction: Signal-averaged electrocardiogram, Holter monitoring and radionuclide ventriculography. *J Am Coll Cardiol* 1987; 9:531-8.
4. Nelson SD. Clinical utility of signal-averaged electrocardiography. *Practical Cardiology* 1989; 15:59-72.
5. Physician's Guide. MAC 12/15 ECG Cart Op-

## A New Era of MRI Capability



### Three-Dimensional Magnetic Resonance



### Magnetic Resonance Angiography

- MRI/MRA technology not available anywhere else in the immediate area
- 1.0 tesla magnet manufactured by Siemens, a world leader in advancing MRI applications
- Convenient location, 1/2 mile east of I-95, on the campus of the Greater Laurel-Beltsville Hospital
- Board Certified Radiologists with training and experience in MRI.
- Next Day scheduling in most cases

*Open Monday - Friday*  
8:00 AM to 11:00 PM



7400 Van Dusen Road  
Laurel, Maryland 20707

(301) 725-8995

tions. High Resolution, Vector Loop Display, Pacemaker Analysis. Marquette Electronics Inc., 1989.

6. Gomes JA, Winters SL, Stewart D et al. A new noninvasive index to predict sustained ventricular tachycardia and sudden death in the first year after myocardial infarction: Based on signal-averaged electrocardiogram, radionuclide ejection fraction and Holter monitoring. *J Am Coll Cardiol* 1987; 10:349-57.

7. Gomes JA, Winters SL, Martinson M et al. The prognostic significance of quantitative signal-averaged variables relative to clinical variables, site of myocardial infarction, ejection fraction and ventricular premature beats: A prospective study. *J Am Coll Cardiol* 1989; 13:377-84.

8. Gomes JA, Mehra R, Barreca P et al. Quantitative analysis of the high frequency components of the signal-averaged QRS complex in patients with acute myocardial infarction: A prospective study. *Circulation* 1985; 72:105-11.

9. Dennis RA et al. Prognostic significance of ventricular tachycardia and fibrillation induced at programmed stimulation and delayed potentials detected on the signal-averaged electrocardiogram of survivors of acute myocardial infarction. *Circulation* 1986; 74:731.

10. Leitner RV et al. Value of non-invasively detected delayed ventricular depolarizations to predict prognosis in post-myocardial infarction patients. *Circulation* 1989; 111:83.

### Acknowledgment

The authors thank Mr. James Clements for his assistance. ■

INTERIOR DESIGN • SPACE PLANNING •  
FURNITURE & CABINETRY SELECTION • CUSTOM  
CABINETRY • SURGI-CENTERS • SURGERY &  
AMBULATORY CARE FACILITIES • MEDICAL &  
DENTAL OFFICES • LABORATORIES • MEDICAL  
OFFICE BUILDINGS • CONSTRUCTION  
ADMINISTRATION • COST ESTIMATING



**LEVIN/BROWN & ASSOCIATES**  
ARCHITECTS/INTERIOR DESIGNERS

17 Warren Road  
Suite 7B  
Baltimore, MD 21208  
(301) 486-9006



# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS<sup>TM</sup> MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

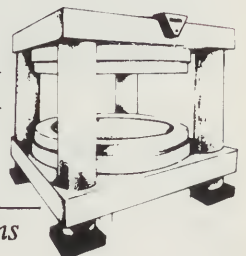
At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



ACCESSIBLE MRI of  
BALTIMORE COUNTY, INC.

Formerly Greater Baltimore MRI Center, Inc.

110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



---

*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



# Meet the new team in town.

Maryland General Hospital of Baltimore has teamed up with Bryn Mawr Rehab of Malvern, Pennsylvania, one of the premier physical medicine and rehabilitation facilities in the country to form *Maryland General-Bryn Mawr Rehab Center*.

The new center, staffed by 50 of the finest rehab physicians, therapists, nurses and clinical specialists in the area, will offer the highest quality, comprehensive inpatient and outpatient rehabilitation services.

*Maryland General-Bryn Mawr Rehab Center* features 33 inpatient rehab beds with 15 devoted

to brain injured patients and 18 designated for orthopedic and neurological rehabilitation. Outpatient services are available at the Maryland General Campus in Baltimore and at our satellite health care centers in the neighboring communities of Catonsville and Timonium.

We invite you to meet the new team in town. Call Mary Filippelli, our Administrative Director at (301) 225-8380 to get all the details and to arrange for a tour of our new facility.

*Maryland General-Bryn Mawr Rehab Center.* When it comes to rehab care, we're strictly major league.



MARYLAND GENERAL  
BRYN MAWR REHAB CENTER

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380



---

# Retrieval and Unknotting of Inadvertently Placed Intravascular Catheters

Diran R. Bezirdjian MD

*Dr. Bezirdjian is a Staff Radiologist at Harbor Hospital Center, Baltimore, MD.*

---

*Percutaneous transcatheter retrieval is a safe and reliable method which makes an operative procedure unnecessary and helps avert potentially fatal complications.*

---

The insertion of an indwelling venous catheter has become a commonplace procedure in the treatment of various clinical conditions. One of the most catastrophic iatrogenic complications of this procedure is the inadvertent loss of extracorporeal catheter control. This may happen during the initial insertion, such as with a fracture of the catheter tip, especially if it is of a soft silastic material, or during catheter exchange when the hub is severed in anticipation of replacement. This latter problem is especially frequent with inexperienced operators.

Such events may become medico-legal problems resulting in embarrassment to the involved clinical services. Complications include cardiac chamber perforation, pulmonary embolization, and sepsis.<sup>1</sup> These conditions are potentially fatal. Turner and Sommers reported a fatality from the accidental passage of a catheter into the right atrium.<sup>2</sup>

It is essential for the operator to recognize this complication at an early time. It also behooves the radiologist to be alert to the position of various support catheters, as serial chest radiographs are usually obtained in critically ill patients (Figures 1 and 2). The interventional radiologist should be the first one contacted for a percutaneous removal of such misplaced catheters. An elaborate surgical procedure, especially in the case of intracardiac catheters, may be averted.

The preferred approach in transcatheter retrieval is the femoral venous route, as this allows more flexibility in the positioning and maneuvering of the retrieving device. Since the description by Turner and Sommers,<sup>2</sup> a variety of retrieval techniques and devices have been reported, including the use of a snare, a basket, or an intravascular forceps.<sup>3,4</sup>

A catheter and wire combination is used to produce a loop around the foreign object which is then snared out. With the basket technique or using an intravascular forceps, the catheter to be retrieved is grabbed and caught in the wires of the basket or the toothlets of the forceps and removed (Figure 3).

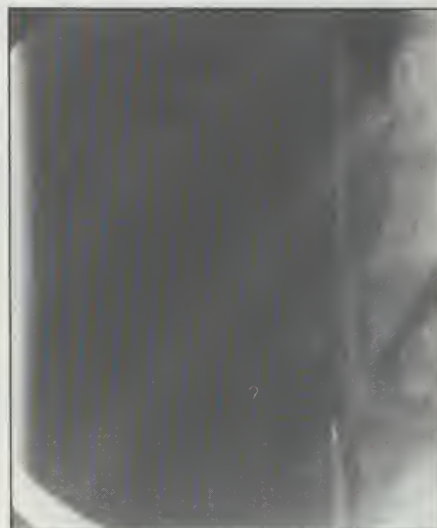
When a catheter is inadvertently positioned in one of the cardiac chambers, the need may arise to first deflect the catheter tip away from the heart and into the inferior vena cava (IVC) prior to final



**Figure 1.** A chest radiograph shows separation of the tip of a Porta-Cath along the atriocaval junction.



**Figure 2.** A catheter and stiff wire combination is used to retrieve the broken fragment.



**Figure 3.** An indwelling catheter is caught within the wires of a basket during percutaneous retrieval.



**Figure 4.** A Swan-Ganz catheter is inadvertently knotted along the superior vena cava.



**Figure 5.** A stiff wire and catheter combination is used to untie the knot by pulling on the stiff wire at the groin while simultaneously applying gentle traction at the entry site of the knotted catheter. (Courtesy Dr. J. Tisnado, Medical College of Virginia, Richmond, VA.)

(Figures 4 and 5). Careful cardiac monitoring for arrhythmias is mandatory.

In conclusion, percutaneous transcatheter retrieval and unknotting of inadvertently placed intravascular catheters is a safe and reliable method that makes an operative procedure unnecessary and helps avert potentially fatal complications.

## References

1. Randall PA. Percutaneous removal of iatrogenic intracardiac foreign body. *Radiology* 1972; 102:591-5.
2. Turner DC, Sommers SC. Accidental passage of a polyethylene catheter from a cubital vein to right atrium: Fatal case. *New Engl J Med* 1954; 251:744-5.
3. Uflacker R, Lima S, Melichar AC. Intravascular foreign bodies: Percutaneous retrieval. *Radiology* 1986; 160:731-5.
4. Selby JB, Tegtmeier CJ, Bittner GM. Experience with new retrieval forceps for foreign body removal in the vascular, urinary and biliary systems. *Radiology* 1990; 176:535-8.

## Acknowledgments

I would like to thank Ms. Margaret Sprucebank for helping in the preparation of this manuscript. ■

retrieval. The first step can be achieved using a deflector wire or a stiff wire hooked on a portion of the catheter to be retrieved.

A different problem may be encountered when a knot forms during insertion even though a venous catheter has been properly positioned. Knots can be untied by using a stiff or deflector wire engaged at the knot. Gentle traction on the wire at the groin, while simultaneously holding the knotted venous catheter at the entry site, usually unties the knot. This procedure is best performed with the knot positioned in the right atrium, to allow enough room for wire manipulation



## THE MAGNIFICENT SEVEN ARE AT YOUR SERVICE.



**T**he seven PSA Financial affiliated companies are specialists, each in its own sphere of operation. Individually and in combination, they provide financial services, risk management and investment counseling to the medical profession, and over the years have gained recognition as outstanding performers in their several fields.

Contact any of our affiliates to enjoy the satisfaction and sense of security that comes from having probably the best financial service specialists in the business on your side.

Planning for our Clients Financial Future Since 1928.



**PSA Financial Center**  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

**PSA Professional Liability, Inc.**  
*Malpractice Insurance*

**PSA Financial, Inc.**  
*Employee Benefits*

**PSA Financial Advisors, Inc.**  
*Financial Planning*

**PSA Capital Management, Inc.**  
*Investment Management*

**PSA Pension Services, Inc.**  
*Design & Administration*

**PSA Insurance, Inc.**  
*Agents & Brokers*

**PSA Equities, Inc.**  
*Broker / Dealer*

## Meeting & Entertainment Rooms

*The perfect setting  
for parties or  
parliamentary procedures.*

Located across the street from the Meyerhoff  
and a block from the Lyric.

Med Chi has space to accommodate your  
next social or business group  
gathering.

Contact Convention Services at 301-539-0872  
or at 1-800-492-1056 toll free in Maryland  
for information.



## Luxury Homesites

### ABOUT VILLAGER

The Villager name stands for quality built homes and personalized service: use our architects or yours, build on your lot or ours. We can arrange financing, locate a lot for you, and can even sell your old house! So, compare what Villager offers.

### PIKESVILLE

**HELMSLEY COURT LOT 18** - Level treed lot, your architect or ours. One of the last available lots in this prestigious neighborhood. Public water, sewer & gas. Ft. Garrison Elementary.

### CAVES VALLEY

**HUNTINGTON** - Large wooded lot on private drive overlooking new golf course. Excellent investment/superior well yield. Purchase lot or custom build with us.

### NEW

### HILLSTEAD

**KNOLLCREST FARMS LOT 3** - Fully wooded, beautiful acre plus lot with 11 GPM well. Located at Falls Road and the Beltway for close-in easy access. Build in a neighborhood of million dollar homes. Custom home with lot from \$450,000.



The EURO/CLASSIC I

Lots now also available at  
Huntspring in Ruxton and  
Worthington Park in Owings Mills.

**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

Brokers  
Protected



McDonogh Crossroads • 20 Crossroads Drive, Suite 113  
Owings Mills, MD • Day 363-0963 • Eve 602-0820

## BECO MANAGEMENT, INC.

### Medical Suites Available

Montgomery Village Professional Center  
19201 - 19271 Montgomery Village Avenue  
Gaithersburg, Maryland

Southern Medical Building  
9131 Piscataway Road  
Clinton, Maryland

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

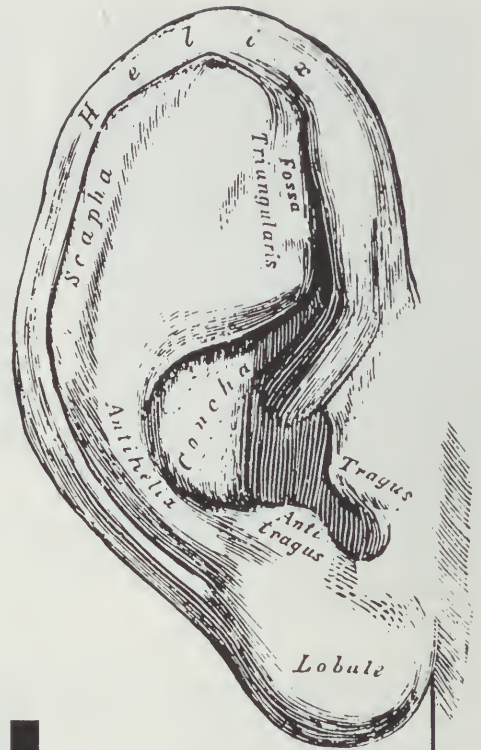
Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550

# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas.... and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
maryland

Free to Med Chi members.



## Component Society Presidents

The Medical and Chirurgical Faculty of Maryland and its component societies make up the Maryland family of medicine. This section of the *Maryland Medical Journal* is dedicated to the leaders of our component societies and features biographical information on Med Chi component society presidents.

### **Allegany County** **Kheder Ashker MD**



*Kheder Ashker MD* assumed the office as President of the Allegany County Medical Society in January 1991. A 1972 graduate of Damascus Medical School, Dr. Ashker fulfilled his internship and Surgical residency requirements at the Shadyside Hospital in Pittsburgh, Pennsylvania. In 1975, he began a two-year residency specializing in Anesthesiology at West Virginia University where he also completed Neurosurgical residency training. Dr. Ashker has maintained a Neurosurgical practice in Cumberland, MD since 1981.

### **Anne Arundel County** **Ronald C. Sroka MD**



*Ronald C. Sroka MD* began his second term as President of the Anne Arundel County Medical Society in January 1991. Born in Baltimore, Dr. Sroka attended the University of Maryland where he received both his BA and MD degrees. He served his internship and residency in Family Medicine at Franklin Square Hospital where he became Chief Resident in 1978. Dr. Sroka currently maintains a Family Practice in Crofton, MD and is a member of the medical staff at Anne Arundel Medical Center.

Dr. Sroka currently maintains a Family Practice in Crofton, MD and is a member of the medical staff at Anne Arundel Medical Center.

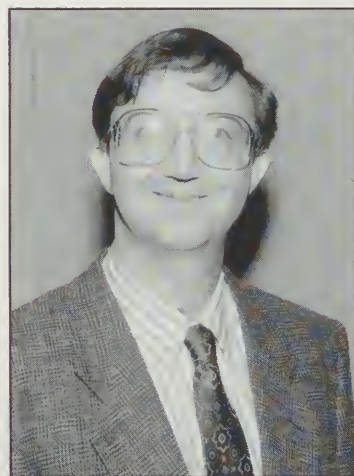
### **Baltimore City** **Joseph H. Hooper MD**



*Joseph H. Hooper MD* became President of the Baltimore City Medical Society at the Society's Annual Meeting on December 7, 1990. Dr. Hooper is a native Baltimorean who received his medical degree from The Johns Hopkins University Medical School in 1954. He served his internship and residency at Union Memorial Hospital

from 1954 to 1956, and then entered the U.S. Navy. He finished active duty as Lieutenant Commander in 1958 and resumed his residency training at the Veteran's Administration Hospital in Perry Point, MD. He returned to Union Memorial Hospital, completing his residency training as Chief Surgical Resident in 1963 and entered the private practice of Surgery in Baltimore City. He is a fellow of the American College of Surgeons and holds hospital privileges at Union Memorial Hospital, Greater Baltimore Medical Center, and The Johns Hopkins Hospital.

### **Baltimore County** **Harold B. Bob MD**



*Harold B. Bob MD* was installed as the ninety-second President of the Baltimore County Medical Association at its Annual Meeting on January 12, 1991. Born in Buffalo, New York, Dr. Bob received his BS and MD degrees from the State University of New York at Buffalo. He fulfilled his internship and residency requirements at Wilmington Medical Center in Delaware. A member of the medical staff of Baltimore County General Hospital, he is a Family Practice physician who has maintained an office in the Pikesville area since 1976.

A member of the medical staff of Baltimore County General Hospital, he is a Family Practice physician who has maintained an office in the Pikesville area since 1976.



**Calvert County**  
Joseph S. Fastow MD, MPH

*Joseph S. Fastow MD, MPH* began his term as President of the Calvert County Medical Society in January 1991. A 1962 graduate of Rutgers University, Dr. Fastow received his MD from the Boston University School of Medicine. He fulfilled his internship requirements at the Pennsylvania Hospital in Philadelphia and later went on to become Assistant Resident in Anesthesiology (Intensive Care Medicine) at the George Washington University Hospital in Washington, DC. During that period, Dr. Fastow also served in the military and worked for the U.S. Public Health Service, the Food and Drug Administration, and the National Heart and Lung Institute. From 1974 to 1977, Dr. Fastow completed a residency and fellowship in Emergency Medicine at The Johns Hopkins Hospital. In 1977, he earned an MPH from The Johns Hopkins University School of Hygiene and Public Health. He took a position as a Clinical Instructor for the Georgetown University School of Medicine where he later advanced to Clinical Assistant Professor in 1981. A fellow of the American College of Emergency Physicians, Dr. Fastow has held a number of positions including, Assistant Director to the Department of Emergency Medicine at the Doctors' Hospital of Prince George's County and staff physician at the Department of Emergency Medicine at Holy Cross Hospital. He has been Director of Emergency Services for Calvert Memorial Hospital in Prince Frederick, Maryland since 1985.

**Caroline County**  
Christian E. Jensen MD



*Christian E. Jensen MD* began his twelfth consecutive year as President of the Caroline County Medical Society in January 1991.

Dr. Jensen obtained a BA and an MA in Economics from Rutgers University and worked as a business executive for five years before enrolling at the Duke University Medical School from which he graduated in 1972. An officer in the U.S. Naval Reserve since 1955, he served his internship at the Naval Hospital in Portsmouth, Virginia and then immediately entered into a private Family Medicine practice in Denton, MD. In 1982, Dr. Jensen accepted a position as medical supervisor for E.I. Dupont De Nemours in Seaford, Delaware. During his eight-year

tenure with that company, Dr. Jensen completed a mini-residency in Occupational Medicine at the University of Cincinnati College of Medicine and graduated from the Naval War College in Newport, Rhode Island. In 1990, he received an MPH from the Medical College of Wisconsin and became President and Corporate Medical Director of the Delmarva Foundation in Easton, Maryland. In January of this year, Dr. Jensen was recalled to active military duty with the U.S. Navy for Operation Desert Storm in Saudi Arabia.

**Carroll County**  
Chitrachedu Naganna MD



*Chitrachedu Naganna MD* began his second term as President of the Carroll County Medical Society in January 1991. Dr. Naganna attended the Government Arts College in India and received his medical education at SV University in India from 1962 to 1967. After receiving his medical degree, he served a house surgeonship at the KMC

Government Hospital in India. He served his internship, residency, and senior residency at the Jamaica Hospital in Queens, New York. In 1972, Dr. Naganna accepted a fellowship in Cardiology at the Brookdale Hospital Medical Center in Brooklyn. From 1974 to 1975, Dr. Naganna was an assistant attending on the associate medical staff in Medicine and Cardiology of Brookdale Hospital Medical Center. He was a consultant in Cardiology at the Flatbush General Hospital in Brooklyn and a consultant in Medicine and Cardiology at the Brooklyn State Hospital in 1974. The following year, Dr. Naganna moved to Maryland where he now holds hospital privileges at Carroll County Hospital and Baltimore County General Hospital.

**Cecil County**  
Henry Farkas MD, MPH, FACEP

*Henry Farkas MD, MPH, FACEP* began his sixth year as President of Cecil County Medical Society in January 1991. Dr. Farkas was born in New York City, attended Loyola College, and earned his medical degree from The Johns Hopkins Medical School in 1970. In 1971, he received his MPH from The Johns Hopkins School of Hygiene and Public Health. After fulfilling his internship at the Lancaster General Hospital in Lancaster, Pennsylvania, Dr. Farkas served as General Medical Officer for the U.S. Public Health Service on a Navajo Reservation in Chinle, Arizona.





In 1973, he returned to Maryland where he served as an emergency physician for Harford Memorial Hospital. From 1984 to 1990, Dr. Farkas worked as Medical Director for the Cecil County Detention Center. Dr. Farkas now practices Emergency Medicine at Union Hospital of Cecil County. He also holds positions as Medical Director for the Northern Chesapeake Hospice and the Medical Adult Day Care Center of Union

Hospital of Cecil County.

**Dorchester County**  
W. Craig Wessells MD

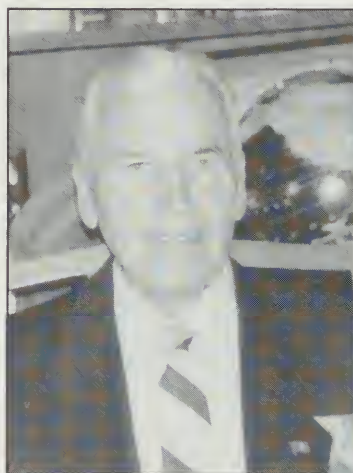


*W. Craig Wessells MD* became President of the Dorchester County Medical Society in January 1991. Born in Nassawadox, Virginia, he earned a BS from the College of William and Mary in 1975, and graduated from the Eastern Virginia Medical School in 1978. After serving his internship and first-year residency at the Eastern Virginia Medical School, Dr.

Wessells completed his residency training at the Sheppard and Enoch Pratt Hospital in Baltimore in 1983. That same year, he began a fellowship in Child and Adolescent Psychiatry at the University of Maryland and Sheppard and Enoch Pratt Hospitals, becoming Chief Fellow in 1984. Dr. Wessells is currently staff psychiatrist at the Eastern Shore Hospital Center and maintains a private practice in Cambridge.

**Frederick County**  
Henry P. Laughlin MD, ScD, ScSD

*Henry P. Laughlin MD, ScD, ScSD* became President of the Frederick County Medical Society in January 1991 and is the first physician to have held the office of President in both Frederick and Montgomery Counties (1959-1960). A native of Hagerstown, Dr. Laughlin attended The Johns Hopkins University and earned a BS from Ursinus College in 1938. He obtained his medical degree from the Temple University



School of Medicine in 1941. Following graduation, he served over seven years as a U.S. Navy physician and surgeon during World War II in the American, Caribbean, African-European, and Asiatic theaters of operation, as well as in the United States. Following the war, Dr. Laughlin maintained a private practice as a specialist in Psychiatry

for forty years in the Chevy Chase, Bethesda, and Frederick areas. During that time, he served fellowships for the American Medical Association and the Washington Medical and Surgical Society. He was a faculty member at the George Washington University Medical School for thirty-five years, the last six with the rank of Clinical Professor. From 1974 to 1989, Dr. Laughlin served as Distinguished Visiting Professor at the University of Louisville School of Medicine. An active participant in numerous organizations, Dr. Laughlin is the recipient of many awards and holds an honorary ScD degree from Ursinus College and an ScSD degree from the University of Louisville. Dr. Laughlin currently serves as Associate Editor for the *Maryland Medical Journal* and the *Physician's Practice Digest*. He is also an emeritus staff member of Suburban Hospital in Bethesda and Frederick Memorial Hospital.

**Garrett County**  
John L. Porcaro MD



*John L. Porcaro MD* began his second term as President of the Garrett County Medical Society in January 1991. Born in New York City, Dr. Porcaro graduated from the University of Medicine and Dentistry of New Jersey (UMDNJ) in Newark where he began his residency in General Surgery in 1978. He moved on to become a resident in

Ear, Nose, Throat, Head and Neck Surgery at the Columbia University College of Physicians and Surgeons in New York. Dr. Porcaro returned to UMDNJ to complete his residency training in General Surgery and became a fellow in Vascular Surgery in 1982. A



fellow of the American College of Surgeons, Dr. Porcaro was appointed Clinical Assistant Professor of Surgery for the West Virginia University. He is currently Chief of Staff and Chief of the Anesthesia Department for the Garrett County Memorial Hospital.

**Harford County**  
Joseph A. Reinhardt MD



*Joseph A. Reinhardt MD* became President of the Harford County Medical Society in January 1991. After he obtained a BS from the University of Maryland, Dr. Reinhardt attended The Johns Hopkins University Medical School and graduated in 1973. He served his internship and residency at the Georgetown University Hospital from 1973 to 1976,

after which he completed a Cardiology fellowship at the Medical College of Virginia. Dr. Reinhardt currently serves as Assistant in Medicine at The Johns Hopkins Medical School. He is an active staff member of the Fallston General Hospital and is a courtesy staff member at Harford Memorial Hospital, Greater Baltimore Medical Center, and The Johns Hopkins Hospital.

**Howard County**  
Charles E. Taylor MD

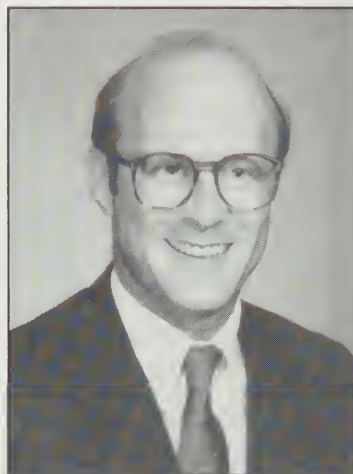


*Charles E. Taylor MD* was inaugurated as President of the Howard County Medical Society in January 1991. Originally from Pennsylvania, Dr. Taylor graduated from Swarthmore College in Pennsylvania and received his medical degree from the Washington University School of Medicine in St. Louis, Missouri in 1953. He served his

internship and residency at the St. Louis City Hospital. In 1957, he completed his resident training at the Maine Medical Center in Portland, following which he maintained a private practice in Internal Medicine in New Hampshire for thirteen years. He moved to Columbia, Maryland in 1969 and entered into group

practice with the Columbia Medical Plan and Patuxent Medical Group, where he continues to practice Internal Medicine. An active staff member of the Howard County General Hospital, Dr. Taylor is also on the courtesy staff of The Johns Hopkins Hospital.

**Kent County**  
Douglas M. Cummings MD, FACS



*Douglas M. Cummings MD, FACS* was installed as President of the Kent County Medical Society in January 1991. After graduating from the U.S. Military Academy at West Point, New York, Dr. Cummings was in the U.S. Army for four years and served in Vietnam before entering medical school. He graduated from the University of Arkansas

School of Medicine in Little Rock in 1976. He completed his internship and residency in Urology at the Walter Reed Army Medical Center in Washington, DC. He retired from the military in 1988 after practicing at the Fort Meade Army Hospital and established a private practice in Chestertown. A fellow of the American College of Surgeons, Dr. Cummings currently resides in Betterton, Maryland.

**Montgomery County**  
Herman C. Maganzini MD



*Herman C. Maganzini MD* FACP was inducted as President of the Montgomery County Medical Society (MCMS) on May 1, 1991 and is the first physician to be elected as MCMS President on two different occasions: 1972-1973 and 1991-1992. A native of New York City, Dr. Maganzini graduated from Fordham University and received

his medical degree from Georgetown University School of Medicine in 1952. He served his internship in Internal Medicine at the Georgetown University Hospital and at the U.S. Air Force Hospital on the Mitchell Air Force Base in New York. He returned to



the Washington, DC area in 1955 to fulfill his residency training in Internal Medicine at the Georgetown University Hospital and the Veterans Administration Hospital in Washington, DC. From 1959 to 1962, Dr. Maganzini served as a Research Associate in the Department of Physiology and Biophysics at the University of Georgetown School of Medicine. A fellow of the American College of Physicians, Dr. Maganzini currently maintains a private Cardiology practice in Rockville. He is senior attending physician at Suburban Hospital, an attending physician at Holy Cross Hospital, and a member of the courtesy staff at Shady Grove Adventist Hospital.

**Prince George's County**  
Suresh C. Gupta MD, FCCP

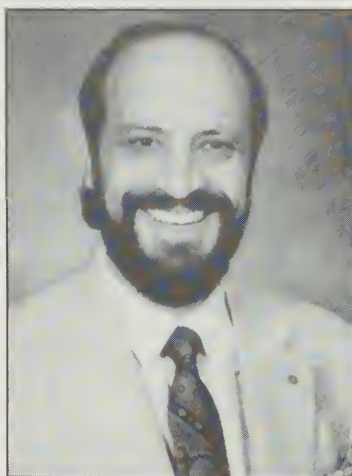


*Suresh C. Gupta MD, FCCP* was inaugurated as President of the Prince George's County Medical Society in January 1991. Dr. Gupta earned his MBBS degree from the All India Institute of Medical Sciences in New Delhi, India, where he also completed his internship and served as resident house physician in Internal Medicine. Dr.

Gupta also served residencies at the Chase Farm Hospital in Middlesex, England; the War Memorial Hospital in Lincolnshire, England; the Worcester City Hospital in Worcester, Massachusetts; and the DC General Hospital in Washington, DC. Dr. Gupta served fellowships in Chest Diseases for the Georgetown Medical Division of the DC General Hospital in 1969 and 1971, and the Georgetown University Hospital in 1970. From 1972 to 1973, Dr. Gupta was an Assistant Professor of Medicine for the Pulmonary Disease Division of Howard University. He was also a lecturer in Physiology and Biophysics at the Georgetown University School of Medicine and a Clinical Instructor at the Georgetown University School of Medicine. Dr. Gupta is currently Medical Director for the Cora B. Wood Senior Center in Brentwood, MD. Dr. Gupta is Board Certified in Internal Medicine and Pulmonary Medicine and also has a private practice in Prince George's County. He was recently appointed by Parris Glendening as Vice Chairperson of the Prince George's County Executive's Blue Ribbon Commission on Health. He also serves as an Executive Committee member of Prince George's County Medical Center.

**Washington County**

J. Ramsay Farah MD, MPH, FAAP, FACPM



*J. Ramsay Farah MD, MPH, FAAP, FACPM* has served as the President of the Washington County Medical Society since 1989. Born in Beirut, Lebanon, Dr. Farah received his BSC, MD, and PL I at the American University of Beirut. He completed his PL II and PL III residency requirements at the University of Maryland Hospital where

he also served a fellowship in Pediatrics. At The Johns Hopkins University School of Hygiene and Public Health, he completed his MPH and residency training in General Preventive Medicine (epidemiology). Dr. Farah is a fellow of both the American Academy of Pediatrics and the College of Preventive Medicine. He has served on the faculties of the University of Maryland and The Johns Hopkins University. He has been very active in the western Maryland region, serving as Chairman of Ambulatory Care at the Cumberland Memorial Hospital and as Chairman of Pediatrics at Washington County Hospital. His work has included significant care for retarded and handicapped citizens. He has served extensively as a member and officer of diverse health associations, hospital committees, and executive boards at the local, national, and international levels. Through the years he has distinguished himself with continuous and relentless efforts in professional and community service. He is a recipient of Med Chi's A.H. Robins Award. Dr. Farah currently maintains a private practice in Hagerstown.

**Wicomico County**  
Farouk A. Sultani MD



*Farouk A. Sultani MD* began his term as President of the Wicomico County Medical Society in January 1991. Born in Kampala, Uganda, Dr. Sultani attended the Government College in Hyderabad and received an MBBS from the Sin University Liaquat Medical College in Pakistan in 1972.

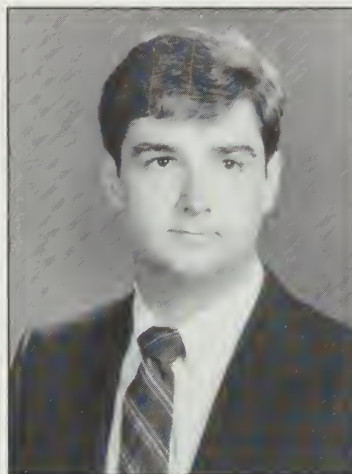
Four years later, he graduated from the University of Miami School of Medicine with an ECFMG-MD degree. Dr. Sultani fulfilled his Surgical internship at the St. Francis Hospital in Miami Beach. In 1980, after completing his residency training in General Surgery at Maryland General Hospital and the University of Maryland Medical System, he moved to Jackson, Mississippi to undertake two years of residency training in Plastic, Reconstructive, and Hand Surgery. Dr. Sultani currently maintains a private Plastic, Reconstructive, and Hand Surgery practice in Salisbury. He maintains hospital privileges at Peninsula General Hospital and Memorial Hospital, and is a consultant to Deer's Head Rehabilitation Center.

**Worcester County**  
**Stephen F. Waters MD**

*Stephen F. Waters MD* began his second term as President of the Worcester County Medical Society in January 1991. Born in Gettysburg, Pennsylvania, Dr. Waters received his BA in Biology at the Catholic University of America in Washington, DC. He studied at the Catholic University of America and the University of Maryland before entering the Georgetown University School of Medicine in 1976. After receiving his MD in 1980, Dr. Waters served a Family Practice residency at Franklin Square Hospital until 1983. Dr. Waters currently maintains a private practice in Fami-

ly Medicine and Ambulatory Medicine at the Ocean City Medical Center.

**Student Component Society**  
**W. David Sullivan**



*W. David Sullivan*, a third-year medical student at The Johns Hopkins University, is currently serving as President of the Medical Student Component Society of the Medical and Chirurgical Faculty of Maryland. Born in Mississippi, Mr. Sullivan graduated from the University of Southern Mississippi in 1987. He spent his first postgraduate

year studying at the Federal Institute of Technology in Zurich, Switzerland, as a Fulbright Scholar. Mr. Sullivan currently serves as an alternate delegate for Med Chi's Delegation to the American Medical Association (AMA) and attended the AMA's 1990 annual and interim meetings.

**M**ed Chi would also like to recognize those Component Presidents whose biographical information was not available at press time:

**Charles County**  
**Seetaramayya Nagula MD**

**Queen Anne's County**  
**John R. Smith, Jr. MD**

**St. Mary's County**  
**David C. Allen MD**

**Somerset County**  
**James A. Sterling MD**

**Talbot County**  
**Ludwig J. Eglesder III MD**  
**Resident Component Society**  
**Jeffrey J. Stoddard MD**

## You Manage The Office

### Let Us Do The Rest!

Low Cost Initial Investment  
Daily Management Reports  
Accounts Receivable Report  
Service Analysis Report  
Aging Reports  
BC & BS of MD Forms  
MediCare Forms  
Medical Assistance Forms  
Electronic Submission

Claims Resubmission  
HCFA 1500 Forms  
Third Party Billings  
On-Line Trans. History  
Creating Patient Statements  
Statement Mailing Services  
On-Going Support  
In-House Training  
Complete Documentation

To Put The Computer Center, Inc.  
Mainframe Computer To Work  
For You, Just Call:

**(301) 728-3883**

### Medical Newsletter On **HOW TO PASS BOARD OF INTERNAL MEDICINE**

To Be Mailed From March To August 1991  
For a FREE Sample Copy  
Mail Your Address Card To:  
**Medical Newsletter**  
5 Cullen Drive, West Orange N.J. 07052.



## A Clinical Moment With . . . Diabetes

### The Management of Early Morning Hyperglycemia: Is it Due to Somogyi Effect or Dawn Phenomenon?

*Doctor: My blood glucose test is almost always 200 mg/dl or more when tested at 7:00 a.m. I can keep it at approximately 130 mg/dl before meals and at bedtime. If I reduce the bedtime snack, I will occasionally have a 3:00 a.m. reaction. If I increase the evening insulin dose, I am apt to have a reaction before bedtime. What can I do to correct this problem?*

In the past, hyperglycemia occurring between 5:00 a.m. and 9:00 a.m. was thought to occur only in patients with insulin-dependent diabetes mellitus (IDDM), but it is now known to occur in patients with noninsulin-dependent diabetes mellitus (NIDDM) as well and, to a mild degree, in people who do not have diabetes mellitus.

The Somogyi effect (rebound hyperglycemia following a hypoglycemic episode due to counterregulatory hormone excess) was once thought to explain most of the early morning hyperglycemic results. When it was observed that hyperglycemia could occur even though euglycemia would be maintained during the night, the term "dawn phenomenon" was invoked. It is thought to result from nocturnal increases in growth hormone. Another tenable hypothesis appears to be a variant of a circadian rhythm. The dawn phenomenon is treated by delivering insulin to cover the anticipated nocturnal rise in growth hormone. This can be done with conventional insulin injections or by carefully adjusting the meal plan and the evening dose of modified insulin. In some patients, moving the evening dose of modified insulin from before the evening meal to before bedtime will solve the problem. However, caution must be

exercised because of day-to-day variability of this phenomenon.

The Somogyi effect is treated by adjusting the meal plan, the insulin dose, and the exercise program to prevent nocturnal hypoglycemia. If such a rebound is encountered, blood glucose values may be high temporarily. In this situation, one should not "chase" the elevated blood glucose with more insulin, but allow the upset condition a day or two to become quiet. One must keep in mind the possibility of hypoglycemic episodes during sleep which go unnoticed by the patient.

Occasional self-monitoring of blood glucose between 3:00 a.m. and 4:00 a.m. will provide objective data as to whether one is dealing with a Somogyi effect or the dawn phenomenon.

DeWITTE DeLAWTER MD  
Editor

### A CLINICAL MOMENT WITH...

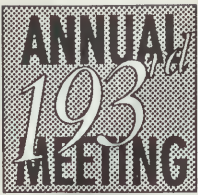
Physicians in all specialties are invited to submit synopses of current clinical problems in a question and answer format.

Write: **A Clinical Moment With...**  
*Maryland Medical Journal*  
**1211 Cathedral Street**  
**Baltimore, MD 21201-5585**

### MED CHI LIBRARY CHARGES

Effective May 1990

	Active Members	Affiliate, Associate, Fellow, and Resident Members
Borrowing from Book Collection	Free	Free
In-house Photocopying	5 articles free each month \$3.00 for each additional article	\$3.00 per article
Interlibrary Loans	\$3.00 per article plus charge from lending library	\$3.00 per article plus charge from lending library
Literature Searching	\$2.00 for each year searched	\$3.00 for each year searched
FAX surcharge	\$5.00 per article	\$5.00 per article



## Medical and Chirurgical Faculty of Maryland

### American Medicine Today: Perspectives from Maryland

Wednesday, May 8 - Friday, May 10, 1991  
at the University of Maryland,  
University College Center of Adult Education,  
College Park, Maryland

Featuring:

**Nationally Recognized Speakers and Guest Panelists**  
**Legislative Affairs and Specialty Society Meetings**  
**16 Hours of AMA Category 1 CME Credits**  
***The Capitol Steps* and Presidential Banquet**  
**Child care offered based upon request**  
**Over 100 Exhibitors**  
**Complimentary box lunches and refreshments**

193rd Annual Meeting - *American Medicine Today: Perspectives from Maryland*, May 8-10, 1991

#### Evening Entertainment Registration

- |   |         |         |
|---|---------|---------|
| <input type="checkbox"/> <i>Capitol Steps</i> and Presidential Banquet (price/person) | \$75.00 | \$_____ |
| <input type="checkbox"/> <i>Capitol Steps</i> only, Wednesday, May 8 (price/person)   | \$50.00 | \$_____ |
| <input type="checkbox"/> Presidential Banquet only, Friday, May 10 (price/person)     | \$50.00 | \$_____ |

#### Meeting Registration

- |  |                    |           |
|--|--------------------|-----------|
| <input type="checkbox"/> Member of Med Chi   |                    | No Charge |
| <input type="checkbox"/> Non Med Chi Member (check category that applies)  |                    |           |
| <input type="checkbox"/> Registering for entire meeting  | \$225.00           | \$_____   |
| <input type="checkbox"/> Limited credit hours (\$25.00/credit hour)  | \$25 X \$_____hrs. |           |
| <input type="checkbox"/> Residents and Students  | \$30.00            | \$_____   |
| <input type="checkbox"/> Apply this fee to my first year's dues.   |                    |           |
| <input type="checkbox"/> I would like accommodation information. (Accommodations available at the Center of Adult Education) |                    |           |
| <input type="checkbox"/> I would like child care on _____(day[s]) for _____(# child[ren]), ages _____.                       |                    |           |
| TOTAL . . . . .  |                    | \$_____   |

FORM OF PAYMENT: ☐ check payable to Med Chi ☐ Visa ☐ Mastercard

Card # \_\_\_\_\_ Signature \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Component Society: \_\_\_\_\_

Reservation is available on site from 8 a.m. each day. Bring this form with you or pick one up at the registration desk.



# PRELIMINARY SCHEDULE

May 1991

## American Medicine Today: Perspectives from Maryland

8

Wednesday

8:00 a.m. - 5:00 p.m. - Registration

8:30 a.m. - Council Meeting

9:00 a.m. - 5:30 p.m. - **Scientific Sessions** -

"Guidelines for Accreditation of CME in Maryland" Workshop ■ "Current Progress in Vascular Diagnosis and Therapy" ■ "Maryland's Medicare Waiver" ■ "Computers in Medical Practice: A Seminar and Hands-On Demonstration" ■ "Medicaid Fraud" ■ "To Test or Not to Test - Random Urine Drug Testing of Physicians" ■ "Drug Utilization Review" ■ "Access to Early Cardiac Care - The Missing Strategy" ■ "Optimizing Drug Therapy Outcomes in Maryland"

9:30 a.m. - House of Delegates Meeting followed by General Membership Meeting

12:00 noon - Registrant's Complimentary Box Lunch

12:00 noon - Auxiliary Luncheon

1:30 p.m. - **Plenary Session** - Elizabeth Dole, President, American Red Cross

2:30 p.m. - Auxiliary Business Meeting

3:15 p.m. - Exhibitors' Sweepstakes Drawing

6:30 p.m. - Exhibitors' Reception (casual attire)

6:30 p.m. - Evening Entertainment - Women in Medicine Reception followed by *The Capitol Steps*, Washington's Favorite Political Cabaret Troupe

9

Thursday

7:00 a.m. - Prayer Breakfast - Rev. Joseph A. Sellinger, S.J., President, Loyola College of Md.

8:00 a.m. - 5:00 p.m. - Registration

9:00 a.m. - Auxiliary Annual Meeting

9:00 a.m. - 5:30 p.m. - **Scientific Sessions**

"Managing Diabetes in the 1990s" ■ "Recent Advances in Cardiology" ■ "Treatment of Outpatient Infections" ■ "HIV Today: Transmission, Testing and Treatment" ■ "Astigmatism in Single Stitch vs Multi Stitch Surgery" ■ "What About Cholesterol In Children" ■ "Current Issues in Rheumatology" ■ "Current Treatment of Anxiety and Insomnia" ■ "Ophthalmologic and Dermatologic Aspects of STD" ■ "Alzheimer's Research and Resources in Maryland" ■ "The Right to Die in Maryland in 1991: After Cruzan" ■ "Breast Cancer in the Socioeconomically Disadvantaged" ■ "Asthma at Work and Play: Management Strategies" ■ "Primary Care of the HIV-Positive Patient" ■ "Sexuality in Children" ■ "Being on the Hotseat" ■ "Shift Worker Injuries and Sleep Physiology" ■ "Treatment of Chronic Pain in Patients with Advanced Cancer" ■ The Diagnosis, Treatment and Pathology of Early Intraductal Cancer of the Breast" ■ "Problems of the Upper Extremities in Musicians" ■ "The Technical, Ethical and Legal Aspects of Surgery Performed without Blood Products"

12:00 noon - Registrant's Complimentary Box Lunch

12:00 noon - Auxiliary AMA-ERF Auction/Luncheon

2:00 p.m. - **Plenary Session** - Marilyn Quayle, National Breast Cancer Spokesperson; John Tupper, M.D., President AMA

3:15 p.m. - Exhibitors' Sweepstakes Drawing

10

Friday

8:00 a.m. - 2:00 p.m. - Registration

9:00 a.m. - 5:30 p.m. - **Scientific Sessions**

"Medical Records: Charting a Course for the '90s" ■ "How to Help Your Pregnant Patients Stop Smoking" ■ "G.I. Disorders Among the Elderly; Prevention of NASID-Induced Ulcers" ■ "Doctor/Lawyer/Teacher Partnership Against Drugs" ■ "Diagnosis and Management of Osteoporosis" ■ "New Concepts in the Treatment of Hypertension" ■ "Current Concepts in the Care of Patients with Inflammatory Bowel Disease" ■ "Challenges to Dermatology in the 1990s" ■ "Testifying Before the Legislature" ■ "Maryland Access to Care Program" ■ "Changes in Medicare Reimbursement" ■ "The Selection of Nonsteroidal Anti-inflammatory Drugs" ■ "Management of Acute Headaches"

2:00 p.m. - House of Delegates Meeting followed by Council Meeting

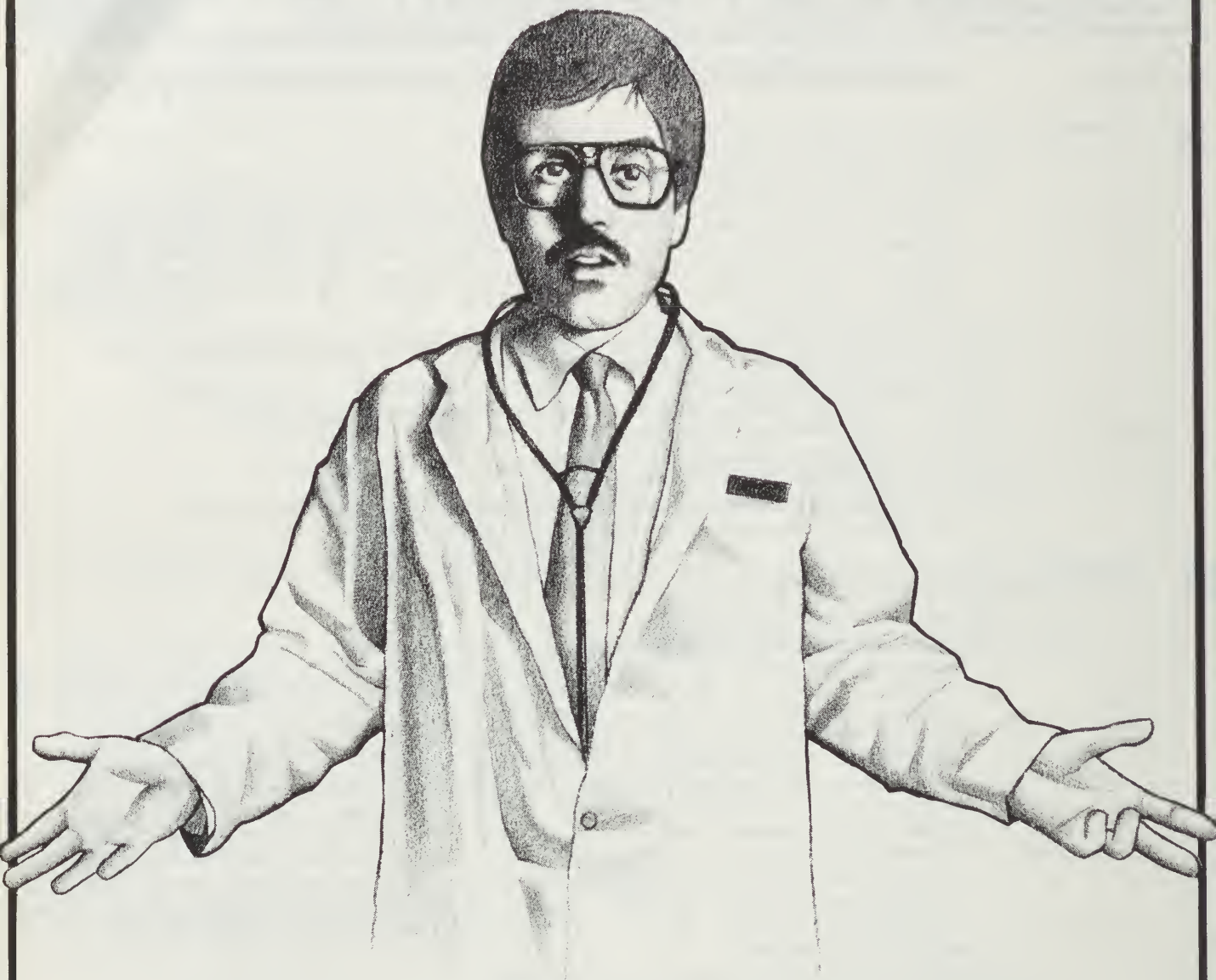
3:00 p.m. - "Health Care Issues of the 1990s" - The Honorable Steny Hoyer (D, MD)

7:00 p.m. - Annual Presidential Banquet - Honoring Reynaldo L. Lee-Llacer, M.D. (Reservation required - Black Tie optional)

This Preliminary Schedule is subject to change.

See the *Executive Director's Newsletter* (page 341) for directions to the Center of Adult Education.

# HOW ABOUT IT?



Is it fair that only some Maryland physicians support the political activity  
that benefits all physicians?

**JOIN THE CAUSE!   GET INVOLVED!   GET POLITICAL!**

Join Maryland Medical Political Action Committee

Send your \$100 check to:  
Harold Bob, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201

Contributions to AMPAC and State PAC are not deductible as charitable contributions for Federal income tax purposes.



### The New Patient Self-Determination Act: How This Law Will Affect the Maryland Physician

The Federal government has recently passed new legislation entitled the *Patient Self-Determination Act* (the Act), which will become effective on or about January 1, 1992.<sup>1</sup> This will be the first time the Federal government will require providers of health care to maintain written policies and procedures governing the adult patient's right to make health care decisions, including the right to accept or refuse medical or surgical treatment and the right to make advance directives.<sup>2</sup> The law will apply to hospitals, home health agencies, hospices, and HMOs receiving Medicare and/or Medicaid funds.

As a result of this new law, organizations offering health care will be required to have written institutional policies relating to the implementation of a patient's advance directives. In this regard, the Act expressly directs providers to document in an adult patient's medical record whether or not the patient has executed an advance directive. The law also explicitly prohibits discrimination against an individual based on whether or not he or she has executed an advance directive.

The Act contains two other salient points. First, organizations providing health care will be required to educate their staffs and the community concerning living wills and medical durable powers of attorney. Second, they will be responsible for assuring that their institution or organization complies with their state's legal requirements governing advance directives.

Although this law will have a profound impact on hospitals and other organizations providing health care, it will have less effect on the role and responsibilities of Maryland physicians. The physician's role concerning patient advance directives has previously been delineated by the Maryland living will statutes in connection with the withholding or withdrawal of life-sustaining procedures.<sup>3</sup> The Maryland Attorney General has written several opinions in an effort to clarify the law and the physician's responsibility with respect to advance directives.

Under the present Maryland law, any legally competent individual over eighteen years of age, can execute a document in advance which declares his or her choices concerning medical treatment decisions when or if s(he) becomes terminally ill or is unable to make his or her own medical treatment decisions.<sup>3</sup>

These laws have interpreted the physician's main responsibility as "providing [the patient] with sufficient information to permit the patient himself to make an informed and intelligent decision..."<sup>4</sup>

According to the law, physicians are required to implement the patient's advance directives and to certify when patients become unable to make their own health care decisions.<sup>5</sup> Although an attending physician may refuse to comply with a patient's advance directive because of his or her own values or

ethics, the physician is obligated to make every reasonable effort to transfer the patient to another physician who will comply with the patient's decision.<sup>6</sup>

The attending physician should place the written advance directive in the patient's medical record for the purpose of documentation as part of his or her medical conclusions.<sup>7</sup> The attending physician may not implement an advance directive if s(he) knows that the declaration has been revoked or that there is a reasonable basis to believe that the patient has revoked the declaration.<sup>7</sup>

A significant feature of Maryland law is that a living will or medical power of attorney may not be implemented if it will deny a patient medical procedures and medication necessary to provide comfort or care, or to alleviate pain. Furthermore, an advance directive may not be implemented if the patient is pregnant.<sup>8</sup>

In response to numerous questions from the health care community regarding advance directives, the Attorney General of Maryland issued several opinions interpreting the living will laws and recognizing the legal effect of a medical power of attorney. In one such opinion, the Attorney General stated that if a person has a properly executed living will, s(he) has the statutory right to have his or her decisions about life-sustaining procedures carried out.<sup>9</sup> The Attorney General also suggested that the current power of attorney law, which authorizes the creation of a general durable power of attorney, is legally sufficient to allow individual patients to write a durable medical power of attorney.<sup>10</sup>

In his 1990 opinion, the Maryland Attorney General directly addressed the dilemma of the physician faced with a patient who has not written an advance directive but who requires a life-sustaining medical decision.<sup>4</sup> The Attorney General advises that if a patient is disabled and has neither decided about the use of life sustaining measures in writing nor has designated an agent to do so, a decision to forgo treatment may be made by either a guardian with the court's approval or by the patient's family if the patient is terminally ill.<sup>4</sup>

The Attorney General also confirmed that the physician's role is to identify the medically reasonable alternatives and the consequences thereof, and to offer a recommendation to the patient. However, the final decision-making authority does not reside with the physician. If the physician believes that a countervailing interest, such as the protection of dependents, should cause the patient's choice to be overridden, the physician should take steps to bring the matter to court.<sup>4</sup>

In conclusion, the new Federal *Patient Self-Determination Act* will significantly change the responsibilities of hospitals and other organizations providing health care but will have little impact on the Maryland physician's role and responsibilities regarding patients' advance directives. This new law will be of mutual benefit to both patients and physicians because it enhances





**Join us in a new kind  
of partnership ...  
uniting doctors,  
lawyers, teachers,  
parents, and youth  
against drug and  
alcohol abuse.**

Become part of the Maryland Doctor/  
Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-  
hand knowledge and experience to make  
a difference in winning the war against  
drugs. Become part of a unique initiative  
in Maryland to bring doctor/ lawyer  
education teams into schools to talk  
about the medical and legal consequences  
of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations  
Department at 301-539-0872,  
1-800-492-1056.**

**Doctor/Lawyer/Teacher Partnership  
Against Drugs**

communication. Also, the new Federal legislation will further the support for patient self-determination implementation of living wills and medical powers of attorney.

#### References

1. Patient Self-Determination Act, Omnibus Budget Reconciliation Act of 1990, §4206, §4751.
2. The law defines an advanced directive as a written instruction, such as a living will or a durable power of attorney for health care, reorganized under state law, relating to the provision of health care when the patient is incapacitated.
3. Md. Health-Gen. Code Ann. §5-601.
4. 75 Op. Att'y Gen. \_\_\_\_\_ (1990). (September 24, 1990).
5. Md. Health-Gen. Code Ann. §5-604(a)(2).
6. Md. Health-Gen. Code Ann. §5-604(b).
7. Md. Health-Gen. Code Ann. §5-604(d).
8. Md. Health-Gen. Code Ann. §5-605.
9. 73 Op. Att'y Gen. 253 (1988).
10. Md. Est. & Trusts Code Ann. §13-601 and 73 Op. Att'y Gen. 272, 275 (1988). The Attorney General suggests that §13-601 of the Estates & Trusts Article, which authorizes the creation of a "durable power of attorney," is legally sufficient to use for writing a medical power of attorney. In arriving at this conclusion, the Attorney General noted that the language of Health-Gen. Code Ann. §§20-107(d) also refers to a durable power of attorney that relates to medical care and is executed under §13-601 of the Estates & Trust Article. The Attorney General used the statutory references as evidence that the Maryland Legislature reorganized a medical power of attorney as a legally-effective instrument in Maryland.

**RANDI KOPF RN, MS, JD**

Associate with Nixon, Hargrove, Devans and Doyle  
Washington, DC.

**ROSEANNE M. MATRICCIANI RN, JD**

Assistant Executive Director for Healthcare Policy  
Medical and Chirurgical Faculty of Maryland.



**TeamCare**  
Infusion Management Services

TeamCare is a clinically  
specialized provider of  
infusion therapy  
services to long term  
care facilities, hospitals  
and patients at home.

From clinical office  
programs to managed  
care clients, we offer  
service intensive programs  
in pediatrics, oncology  
infectious diseases and  
nutritional support.

Baltimore, MD  
(301) 498-8928

Washington, DC  
(301) 989-0300

Tidewater, VA  
(804) 473-0304

Philadelphia, PA  
(215) 938-7390



## Board of Physician Quality Assurance Actions

**In the Matter of  
Manjit R. Bajwa MD  
Before the  
Maryland Board of  
Physician Quality Assurance  
Surrender of License**

December 10, 1990

Dear Dr. Weiner and Members of the Board:

Please be advised that I have decided to surrender my license to practice medicine in the State of Maryland, License Number D12841. I understand that I may not give medical advice or treatment to any individual, for compensation or otherwise, and cannot prescribe medications. In other words, I understand that surrender of my license means that I am in the same position as an unlicensed individual. This decision to surrender my license to practice medicine in the State of Maryland is public, and REVOCABLE, subject to the conditions described as follows:

1. This Letter of Surrender shall become a public document and shall become effective immediately upon its acceptance by the Board of Physician Quality Assurance (the Board), that date being the date on which the Board approves this Letter of Surrender;
2. This period of surrender of my license to practice medicine in the State of Maryland shall stay in effect pending the resolution of all charges involving the suspension of my license to practice medicine in the Commonwealth of Virginia, pursuant to the Order of Summary Suspension, dated on or about October 19, 1990, issued by the Board of Medicine of the Commonwealth of Virginia;
3. After the resolution of all charges involving the suspension of my license to practice medicine in the Commonwealth of Virginia, as described above, I may petition the Board for reinstatement of my license to practice medicine in the State of Maryland. I understand that the Board may take into account the actions of the Commonwealth of Virginia in making a determination of whether to reinstate my license to practice medicine in the State of Maryland;
4. Any resolution of the matters involving this REVOCABLE Letter of Surrender by the Board shall not in any way affect the pendency and any prosecution of any charges brought against my license to practice medicine contemplated by the Board pursuant to the Maryland Medical Practice Act, *Maryland Health Occupations Code Annotated*, §14-501, *et seq.*

My decision to engage in this agreement with the Board to surrender my license to practice medicine in the State of Maryland has been prompted by the

notification of the Board by the Board of Medicine of the Commonwealth of Virginia of those matters involving the aforementioned suspension of my license to practice medicine in the Commonwealth of Virginia, in which it was alleged that I violated certain laws relating to the practice of medicine in the Commonwealth of Virginia, and that my continued practice of medicine constituted a substantial danger to the public health and safety.

On Thursday, December 6, 1990, I received notice of the Board's vote of November 28, 1990 to summarily suspend my license pursuant to *State Government Code Annotated* §10-405 and to charge me under *Health Occupations Code Annotated* §14-504(a)(1) and (21), with underlying grounds (4) and (22).

Section 14-504(a) provides, in pertinent part:

- (a) In general, subject to the hearing provisions of §24-505 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
  - (1) Fraudulently or deceptively obtains or attempts to obtain a license for the applicant or licensee, or for another; and
  - (21) Is disciplined by a licensing or disciplinary authority . . . of any state . . . for an act that would be grounds for disciplinary action under this section.

The underlying grounds that the Board found would be actionable under §14-504(a)(21) include the following:

- (4) Is professionally . . . incompetent; and
- (22) Fails to meet appropriate standards as determined by appropriate peer review for the delivery of quality medical and surgical care performed in an outpatient surgical facility, office, hospital, or any other location in this State.

My decision to engage in a voluntary agreement with the Board to surrender my license to practice medicine in the State of Maryland is based on my desire to avoid summary suspension under *State Government Code Annotated* §10-405. The basis for the summary suspension would include the findings contained in the Order for Summary Suspension issued by the Board of Medicine of the Commonwealth of Virginia, as described above.

I affirm that I have current active hospital privileges at Holy Cross Hospital, located in Silver Spring, Maryland, and Leland Memorial Hospital, located in Riverdale, Maryland, and that I do not have any other privileges at any other hospital, health maintenance organization (HMO), or any other health care institution in the State of Maryland. I also affirm that I am currently licensed to practice medicine in the District of Columbia, and that my license to practice medicine in the Commonwealth of Virginia has been suspended, as described above.

As part of this Letter of Surrender, I shall advise any hospital, HMO, or any other health care facility in the State of Maryland in which I have privileges or am affiliated, that I shall agree to suspend my privileges at

that institution subject to the resolution and conclusion of all matters involving the suspension of my license to practice medicine in the Commonwealth of Virginia, as described above.

I understand that the Board will advise the Federation of State Medical Boards and the National Practitioner's Data Bank, as required by Senate Bill 99-660, through this Letter of Surrender, and any response to inquiry, that I have engaged in an agreement to enter into a REVOCABLE surrender of my license pending the resolution of the Order for Summary Suspension issued by the Board of Medicine of the Commonwealth of Virginia, as described above.

I affirm that I have a current Maryland Controlled Dangerous Substances Registration Certificate M30503, expiration-dated June 30, 1991, issued by the Maryland Division of Drug Control. I acknowledge that I do not have a United States Drug Enforcement Administration Certificate for the State of Maryland.

I acknowledge that, on the date that the Board accepts this REVOCABLE Letter of Surrender, I must present to the Board, Maryland License D12841, including any renewal certificates and wallet-signed renewal cards, and Maryland Controlled Dangerous Substances Registration Certificate M30503, including any prescription pads bearing my name and any prescription ordering forms in my possession or under my control. I further acknowledge that, on the date that the Board accepts this Letter of Surrender, the Board will send a copy of this Letter of Surrender to both the State of Maryland Division of Drug Control and the United States Drug Enforcement Administration, attesting that I am surrendering my privilege to prescribe controlled dangerous substances in the State of Maryland.

I further acknowledge that, on the date that the Board accepts this REVOCABLE Letter of Surrender, the Board will send a copy of this document to John P. Hopkins, Executive Director of the District of Columbia Board of Medicine, 605 G Street, NW, Room 202, Lower Level, Washington, DC 20001, and Hilary H. Connor MD, Executive Director, Board of Medicine of the Commonwealth of Virginia, 1601 Rolling Hills Drive, Suite 200, Richmond, VA 23229.

Finally, I wish to make clear that I have consulted with an attorney before signing this REVOCABLE Letter of Surrender of my license to practice medicine in the State of Maryland. I understand the nature of the Board's actions and this Letter of Surrender fully. I make this decision knowingly and voluntarily. My action, by virtue of this Letter, is not intended to be, nor should it be construed as, an admission of any guilt on my part to any allegations of wrongdoing made by the Virginia Board of Medicine or made or contemplated by the Maryland Board of Physician Quality Assurance.

MANJIT R. BAJWA MD

On behalf of the Board of Physician Quality As-

surance, on this 12th day of December 1990, I accept Manjit R. Bajwa MD's surrender of her license to practice medicine in Maryland.

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance



**In the Matter of  
Rakesh Chandra MD  
Before the  
Maryland Board of  
Physician Quality Assurance**

**Final Decision**

**T**he Board of Physician Quality Assurance (the Board) issued charges against Rakesh Chandra MD (Respondent) on August 2, 1989. The Board charges Respondent pursuant to *Md. Health Occ. Code Ann. (HO) §14-504(6)*.<sup>1</sup> Specifically, the Board charges that

Subject to the hearing provisions of §14-505 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee is convicted of or pleads guilty ... with respect to a crime of moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction or plea set aside (HO §14-504(6)).

A pre-hearing conference was scheduled for September 18, 1989. The Respondent did not attend the pre-hearing conference because he was in India at the time. The hearing was conducted on September 26, 1989. Present at the hearing were: Debra G. Woodruff, Assistant Attorney General, Administrative Prosecutor for the Board; James J. Gitomer, Esquire, representing the Respondent; the Respondent; and Robert J. Gilber, Assistant Attorney General, who was observing.

**Summary of Evidence**

At the hearing, the State introduced the following evidence. No witnesses testified for the State.

1. The 1988 General Assembly, by Senate Bill No. 508 and House Bill No. 855, merged the functions of the former Commission on Medical Discipline and the former Board of Medical Examiners into the new Board of Physician Quality Assurance. The General Assembly also amended *Health Occupation Article §14-504* by repealing §14-504(6) and enacting §14-504(b). §14-504(b) requires the Board to suspend a license if the licensee is convicted of a crime involving moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction or plea set aside. In addition, after the completion of the appellate process, if the conviction has not been reversed or the plea has not been set aside with respect to a crime of moral turpitude, the Board shall order the revocation of a license. Under this repeal and amendment, the grounds for discipline set forth in §14-504(b) remain the same, but the Board's discretion as to sanction is removed. Because the conviction or plea herein occurred prior to the effective date of the Act, the charge is issued under former §14-504(6) of the Act and the former provisions regarding sanctions will apply.



**State Exhibit 1:** The True Test Copies of the Certification, Order of Court, Criminal Information, and Statement of Facts for cases number 18533701 and 28609326, and the Indictment in case number 18533701, consisting of twenty-three pages.

**State Exhibit 2:** A copy of the letter from the Offices of the Attorney General Medicaid Fraud Control Unit to Andrew Radding, Esquire, dated April 2, 1986, noting the details of the Plea Agreement reached between the State and the Respondent, consisting of five pages.

The State rested its case on the above Exhibits. Respondent submitted the following documents for inclusion into the record without any objection from the Administrative Prosecutor.

**Respondent Exhibit 1:** Letters of Recommendation referring to Respondent from the Section Officer of the University of Delhi, Faculty of Law, dated May 5, 1989; Section Officer Administrator of the University of Delhi, Faculty of Law, dated June 29, 1989; M.S. Shukla, Associate Professor, Law Faculty, University of Delhi, Faculty of Law, dated July 28, 1989; Bhushan Tilak Kaul, Lecturer, Law Faculty, University of Delhi, Faculty of Law, dated July 28, 1989; Stephen R. Smith MD, FACP, dated January 2, 1986; and Victor R. Hrehorovich MD, Director, Department of Medicine, South Baltimore General Hospital, dated February 5, 1986, consisting of seven pages.

**Respondent Exhibit 2:** A blank letterhead for Respondent indicating his professional title and address in New Delhi, India. It is undated, consisting of two pages.

Respondent testified on his own behalf. No other witnesses testified for Respondent.

By letter dated October 12, 1989, the Hearing Officer forwarded to Respondent's counsel and the State the Proposed Decision in this case which contained Proposed Findings of Fact, Proposed Conclusion of Law, and a Recommendation. The Hearing Officer notified the Respondent and the State of the right to file exceptions with the Board and stated that any exceptions should be filed within twenty-one days of receipt of the Proposed Decision. By letter dated February 20, 1990, the Board notified the Respondent and the State that it had received no exceptions. The parties were informed that the case would be scheduled for Board action on Wednesday, February 28, 1990.

On Wednesday, February 28, 1990, the Board considered the Proposed Decision, and by clear and convincing evidence and on the affirmative vote of a majority of the full authorized membership of the Board, issued a Proposed Decision. The Decision issued was proposed because the sanction was more severe than recommended by the Hearing Officer.

By letter dated March 22, 1990, the parties were forwarded the Board's Proposed Decision, and informed that exceptions must be filed by April 4, 1990 and that the Board would hear the case on April 11, 1990. On March 29, 1990, Respondent filed exceptions. The State filed no exceptions. At its meeting on Wednesday, April 11, 1990, the Board heard arguments from the parties. Based on clear and convincing evidence on an affirmative vote of the majority of the full authorized members of the Board, the Board issues the following Final Decision.

## Findings of Fact

1. The Board of Medical Examiners issued License Number D 19488 to Respondent on August 9, 1976.

2. On April 7, 1986, Respondent pled guilty to Medicaid Fraud in Baltimore City Circuit Court, Case Number 28609326, *State of Maryland v Rakesh Chandra*, and was found guilty and convicted of same. Respondent was sentenced to one year in the Department of Corrections, starting on April 9, 1986, with four months suspended. Following release, Respondent was to be placed on probation for three years.

3. On April 7, 1986, Respondent pled guilty to Obstruction of Justice in Baltimore City Circuit Court, Case Number 18533701, *State of Maryland v Rakesh Chandra*, in violation of Article 27, §27 (Common Law Conspiracy). Respondent was found guilty and sentenced to one year in the Department of Corrections, suspended four months dating from April 9, 1986 to be served in Baltimore City work release, and upon release, three years supervised probation. Respondent was ordered to pay restitution of \$110,000 with \$40,055.08 to be paid in open court. This sentence was later modified on June 3, 1986, to suspend all remaining time of incarceration.

4. The Statement of Facts to which the Respondent pled guilty provides the details of the criminal activities which are found to involve moral turpitude.

- a. At all times relevant to the Indictment and Information contained in State Exhibit 1, Respondent was an approved provider in the State Medicaid Program as a psychiatrist.
- b. During the period January 1981 through September 1985, Respondent billed Medicaid for services purportedly provided to Medicaid recipients, primarily for psychotherapy conducted by him and his employees who were non-physician, licensed social workers.
- c. All invoices for psychiatric services rendered were signed by Respondent, and each invoice included the code number representing the service rendered and stated the amount charged for the service.
- d. Based on the invoices, the Medicaid Program made payments to Respondent for the period 1981 through 1985 for psychotherapy billed at the maximum amount possible (i.e., fifty-minute therapy sessions) regardless of the amount of time he spent with the patient. Some patients were seen for only ten or fifteen minutes, and some patients were seen only to review and renew their prescriptions for medication. Respondent's billing clerk, therapists employed by Respondent, and numerous patients, verified information regarding Respondent's billing practices to Medicaid.
- e. In December 1984, the grand jury subpoenaed Respondent's 1984 appointment book.

(1) The appointment book submitted on behalf of Respondent supported his billings as submitted to Medicaid for fifty-minute therapy sessions.

- (2) In December 1985, Respondent's billing clerk and social worker therapists were subpoenaed before the grand jury and disclosed that the 1984 appointment book submitted to the grand jury was fabricated, and that the actual appointment book would show the scheduling of many of Respondent's appointments at intervals of every fifteen minutes.
- f. Respondent also made false statements and over-billed on invoices to the Medicaid Program for psychotherapy allegedly conducted with patients at South Baltimore General Hospital.
- (1) Respondent instructed his billing clerk to bill Medicaid for fifty-minute therapy sessions on each day that one of his patients was hospitalized.
- (2) The majority of the documentation, in the form of progress notes, was performed by unlicensed medical students/interns at the hospital, and Medicaid regulations require that the billing physician personally documents the visits.
- (3) In the majority of cases, Respondent, when he came to the hospital to see patients, would see them only during rounds rather than conducting individual psychotherapy with the patients.
- g. Respondent also billed the Medicaid Program and was paid for services of licensed Certified Social Workers performed without his supervision.
- h. Respondent's patient files revealed many instances in which there was no documentation of the visit for which the Medicaid Program was billed and for which the Respondent was paid.
- (1) In December 1984, a subpoena was issued to Respondent for his patient files.
- (2) Respondent instructed his therapists to go back to their patient files and document visits for the prior two years.
- i. The amount of the billings to the Medicaid Program for which Respondent was reimbursed as a result of false statements on invoices submitted to the Medicaid Program was in excess of \$36,666.66 during the period of 1981 through 1985.
5. The commission of Medicaid Fraud, in violation of Article 27, §§230B and 230C, is a crime of moral turpitude.
6. The commission of Obstruction of Justice, in violation of Article 27, §27, is a crime of moral turpitude.
7. Respondent did not appeal his convictions and has completed fulfilling the terms of his criminal probation.

#### Board's Response to the Exceptions

Exception #1 states: The Respondent's case was considered by the Board on February 28, 1990. The Board accepts this exception.

Exception #2 states: That after the Board considered said case they issued a proposed decision which included Findings of Fact, Conclusions of Law, and an Order. The Board accepts this exception.

Exception #3 states: That in footnote No. 3 the Board concluded in its Findings of Facts the following:

However, Respondent has not taken any continuing education courses due to the expense. Similarly Respondent has not taken the American Board in Psychiatry since he cannot afford the refresher course. Additionally, in order to take same he would have to be a licensed physician. Respondent stated he would be willing to perform community service but only wants to perform same on weekends enabling him to work in a paying job during the week.

The Board accepts this exception.

Exception #4 states: A fair reading of the transcript of the proceedings prepared before the examiner would not support the Findings of Fact as above mentioned. For example, see the following:

A. *Transcript pages 55 through 57.* These portions of the transcript indicate that Dr. Chandra would be willing to take an overview course of psychiatry to brush up on what he believes might be some of his weaknesses. In addition, he indicates that if he had a license, he could and would take the APA course as long as he had some realistic expectation of employment.

The Board accepts this exception and has modified present footnote 4.

B. *Transcript page 29, lines 2 - 12.* This portion of the transcript does not indicate that Dr. Chandra is only willing to do community service on the weekends. It actually indicates he would prefer the weekends. However, on line 12, it is clear that he would be willing to do the community service at the Board's discretion.

The Board accepts this exception and has modified present footnote 4. The Board notes that this is a moot point since the Order requires no community service.

Exception #5 states: The above examples tend to portray Dr. Chandra as a person who would only abide by conditions as he sets them. This is a misunderstanding in that Dr. Chandra is more than willing to comply with any probation conditions or any other conditions the Board would mandate.

The Board notes this exception and deems that it needs no response as it relies on no transcript reference.

#### Conclusions of Law

Based on the Findings of Fact, all of which are supported by clear and convincing evidence, and having considered all the Hearing Officer's findings not related to the charges, and on an affirmative vote of a majority of the full authorized membership of the Board, the Board concludes as a matter of law that Respondent committed the following prohibited act:

is convicted of or pleads guilty ... with respect to a crime of moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction or plea set aside (HO §14-504(6)).



## Order

Upon the foregoing Findings of Fact and Conclusions of Law, it is this 12th day of December 1990, by an affirmative vote of the majority of the full authorized membership of those members of the Board of Physician Quality Assurance of Maryland who considered this case,

ORDERED that Respondent's, RAKESH CHANDRA MD, license to practice medicine in Maryland is hereby REVOKED; and be it further

ORDERED that on February 28, 1991, Respondent can apply for reinstatement of his license provided that he complies with the following conditions precedent.

- a. Respondent has completed fifty hours of Board approved Category I continuing education credits in psychiatry;
- b. Respondent has taken and passed the Special Purpose Examination (SPEX), receiving a grade of 75;
- c. Respondent has complied with all conditions of his court ordered probation; and
- d. Respondent submits to psychiatric and psychological examinations by a Board approved psychiatrist and psychologist. These examinations shall be at Respondent's expense. Respondent shall sign a release permitting the Board to forward all relevant documents to those professionals performing the examinations and a release permitting the examiners to forward their reports to the Board; and be it further

ORDERED that in considering Respondent's petition for reinstatement of his license, the Board shall consider the results of the reports and all relevant information; and be it further

ORDERED that if the Board decides to reinstate the Respondent's license, the Board may impose additional conditions relating to Respondent's practice of medicine; and be it further

ORDERED that this is a Final Order and as such is considered a public document pursuant to *State Government Article* §§10-617(h), *et seq*

## Comment

Medicaid fraud is one of the most serious violations of the Medical Practice Act that this Board is called upon to adjudicate. Physicians' billings for professional services, whether to the State or Federal governments or to private insurers, are done primarily on an honor system. Payors are overwhelmed by the volume and complexity of the billing process, and audit capability is limited. Society and the medical profession itself have a right to expect physician behavior in assigning money values to medical services to be scrupulously honest and accurate. Conscious and deliberate fraud in billing contributes to an increasing distrust of doctors, and is an offense against the honor and trust the great majority of physicians deserve.

In particular, fraud in the Medicaid system is espe-

cially censurable. This program is desperately underfunded and every misused dollar contributes to the problem of providing care to the indigent in Maryland. Frustration with perceived complexities and inequities of the Medicaid payment system is no excuse for physicians devising their own rules for dealing with it. All health professionals must rely on the accuracy of medical records. In spite of the date of the violation, this remains an egregious case.

The Legislature, speaking for the citizens of Maryland, has clearly articulated a policy for the Board to follow in these cases. The Board has chosen to use its discretionary powers and revoke Respondent's license. The Board, cognizant of the date of the violation, has given Respondent an opportunity to apply for reinstatement after an evaluation proves that he has rectified the flaws that lead to this action, and has the necessary competency to return to the practice of medicine in Maryland.

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

■   ■   ■

### In the Matter of Supoj Satogkit MD Before the Maryland Board of Physician Quality Assurance

### Final Order

Based on information received by the State Board of Physician Quality Assurance (the Board), the Board voted to charge Supoj Satogkit MD (Respondent) under *Md. Health Occupations Code Ann.* (HO) §14-504(a)(25)(i) (1989 Cum. Supp.) with underlying grounds §14-504(a)(2), (a)(3) and (a)(22). Charges were issued on July 16, 1990. Specifically, the Board charged:

- (a) Subject to the hearing provision of §14-505 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
  - (25) Was subject to investigation or disciplinary action by a licensing or disciplinary authority or by a court of any state or country for an act that would be grounds for disciplinary action under this section and the licensee:
    - (i) Surrendered the license issued by the state or country to the state or country ....

The grounds for disciplinary action under this section are:

- (2) Fraudulently or deceptively uses a license;
- (3) Is guilty of immoral or unprofessional conduct in the practice of medicine;
- (22) Fails to meet appropriate standards as determined by appropriate peer review for the delivery of quality medical and surgical care performed in an outpatient surgical facility, office, hospital, or any other location in this State.

Respondent was notified of the date of a hearing and that if Respondent failed to appear, the hearing could be held *ex parte* under HO §14-505. A hearing was scheduled and held on August 27, 1990 before an Administrative Law Judge. Attending for the State was Debra G. Woodruff, Assistant Attorney General, Administrative Prosecutor. Respondent did not attend.

### Summary of Evidence

The State introduced the following evidence:

**State Exhibit 1:** Respondent's latest renewal application dated November 29, 1989.

**State Exhibit 2:** Certified mail receipt — charging letter dated July 16, 1990 to 101 Medical Boulevard, Hudson Bridge Road, Stockbridge, Georgia.

**State Exhibit 3:** Charging letter noting hand service dated July 16, 1990 to Respondent in Phoenix, Maryland.

**State Exhibit 4:** Investigator's memorandum dated July 16, 1990.

**State Exhibit 5:** Charging letter to 8650 Canal Street, Jonesboro, Georgia dated July 16, 1990.

**State Exhibit 6:** Charging letter to P.O. Box 14, Jonesboro, Georgia dated July 16, 1990.

**State Exhibit 7:** Affidavit of Respondent's father-in-law dated August 23, 1990.

**State Exhibit 8:** Receipt for Certified Mail to Thailand.

**State Exhibit 9:** Charging document dated July 16, 1989.

**State Exhibit 10:** A letter certifying authenticity dated March 29, 1990 from Andrew Watry, Executive Director, Composite State Board of Medical Examiners, State of Georgia (Georgia Board), attaching a Notice of Hearing, dated June 16, 1989, and Order of Summary Limitation and Restriction of License dated June 16, 1989.

**State Exhibit 11:** Voluntary surrender in case number 89-0324 before the Georgia Board.

By letter dated September 21, 1990, the Office of Administrative Hearings issued its recommended decision which included proposed Findings of Fact, proposed Conclusions of Law, and a Recommendation to the Board. The recommended Decision was sent to Respondent, the State, and the Board. The Administrative Law Judge advised the parties of their respective rights to file exceptions. This notice was sent to Respondent at the address given to the Board in Respondent's renewal application. By letter dated November 16, 1990, the Board informed the Respondent and State that the Board would consider the case at its meeting on November 28, 1990. The Board sent this notice to Respondent at three different addresses: his renewal address, an address in Maryland, and to Thailand, his address as given by his father-in-law.

At its meeting on November 28, 1990, the Board considered this case. On an affirmative vote of a majority of its full authorized membership, the Board decided as follows.

### Findings of Fact

Based on clear and convincing evidence, the Board finds that:<sup>1</sup>

1. The Board voted to adopt the Administrative Law Judge's recommended decision subject to revisions by Board counsel to reflect the facts set forth in the State's evidence and to more fully set forth the facts.

1. At all times relevant, Respondent was a physician licensed to practice medicine in Maryland.

2. On Respondent's renewal application, dated November 29, 1989, Respondent stated his address was 101 Medical Boulevard, Stockbridge, Georgia 30281.

3. The Board's charges, dated July 16, 1990, were sent by certified mail, return receipt requested, to Respondent at the above-referenced address.

4. The Board received a return receipt on July 23, 1990 signed by Joyce Williams.

5. The Board sent its charges to Respondent at three other addresses.

6. On August 17, 1990, Respondent's father-in-law telephoned the Administrative Prosecutor and informed the Administrative Prosecutor of Respondent's address in Thailand. An affidavit was signed to this effect.

7. The State sent another copy of the charges to Respondent at the Thailand address.

8. On June 16, 1989, the Composite State Board of Medical Examiners (the Georgia Board) issued a Notice of Hearing to Respondent stating that if the charges contained therein were proven, Respondent's license could be revoked or suspended. On June 16, 1989, the Georgia Board also summarily restricted Respondent's license. Respondent was not permitted to perform gynecological surgery or obstetrical procedures.

9. The Georgia Board charged, *inter alia*, that Respondent:

Knowingly made misleading, deceptive, untrue, or fraudulent representations in the practice of medicine or in any document connected therewith, or practiced fraud or deceit or intentionally made any false statement in obtaining a license to practice medicine, or made a false or deceptive annual registration with the Board (OCGA §43-34-37(a)(2)).

10. The Board may sanction a physician who: Fraudulently or deceptively uses a license (HO §14-504(a)(2)).

11. The Georgia Board charged that Respondent:

Engaged in any unprofessional, unethical, deceptive, or deleterious conduct or practice harmful to the public, which conduct or practice need not have resulted in actual injury to any person. As used in this paragraph, the term "unprofessional conduct" shall include any departure from, or failure to conform to, the minimal standards of acceptable and prevailing medical practice and shall also include, but not be limited to, the prescribing or use of drugs, treatment, or diagnostic procedures which are detrimental to the patient as determined by the minimal standards of acceptable and prevailing medical practice or by rule of the Board (OCGA §43-34-46(a)(7)).

12. The Board may sanction a licensee who:

Is guilty of ... unprofessional conduct in the practice of medicine (HO §14-504(a)(3)).

13. The Georgia Board charged Respondent:

The Board has the authority to refuse to grant a license to an applicant, or to discipline a physician licensed in Georgia if that physician has engaged in unprofessional conduct. For the purpose of the implementation and enforcement of this rule, unprofessional conduct is defined as, but not limited to, participating in or aiding the following:



(f) Any departure from, or the failure to conform to, the minimal standards of acceptable and prevailing medical practice. Guidelines to be used by the Board in defining such standards may include, but are not restricted to:

1. **Diagnosis.** Evaluation of a medical problem using means such as history, physical examination, laboratory, and radiographic studies, when applicable.
2. **Treatment.** Use of medications and other modalities based on generally accepted and approved indications, with proper precautions to avoid adverse physical reactions, habituation, or addiction.
3. **Records.** Maintenance of records to furnish documentary evidence of the course of the patient's medical evaluation, treatment and response. (Board Rule 360-2-09).

14. The Board may sanction a licensee for:

Fails to meet appropriate standards as determined by appropriate peer review for the delivery of quality medical and surgical care performed in an outpatient surgical facility, office, hospital, or any other location in this State (HO §14-504(a)(22)).

15. The acts upon which the Georgia Board based its charges were acts which would be grounds for disciplinary action under HO §14-504.

16. The Georgia Board scheduled a hearing on the charges in case number 89-324 on August 1, 1989.

17. On June 20, 1990, Respondent surrendered his license to practice medicine in Georgia as final disposition of the disciplinary proceedings in Case Number 89-324. On May 15, 1990, the Georgia Board accepted the surrender.

### Conclusions of Law

Based on the Findings of Fact, the Board concludes that Respondent:

Was subject to disciplinary action by a licensing or disciplinary authority ... for [...] acts] which would be grounds for disciplinary action under [HO §14-504] and the ... [Respondent] (i) surrendered the license issued by the State ... to the State ....

The grounds for disciplinary action under HO §14-504 are:

- (2) Fraudulently or deceptively uses a license;
- (3) Is guilty of ... unprofessional conduct in the practice of medicine;
- (22) Fails to meet appropriate standards as determined by appropriate peer review for the delivery of quality medical and surgical care performed in an outpatient surgical facility, office, hospital, or any other location in this State.

### Order

Based upon the Findings of Fact and Conclusions of Law, it is hereby this 11th day of December 1990

ORDERED that Respondent's, Supoj Satogkit MD, license to practice medicine in the State of Maryland is REVOKED and be it further

ORDERED that this is a final order and as such is considered a public document pursuant to State Government Article, *Annotated Code of Maryland*, §§10-611, *et seq.*

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

## The Johns Hopkins Hospital

### PHYSICAL THERAPY OCCUPATIONAL THERAPY PHYSIATRY CONSULTATION SERVICE

Providing Rehabilitation Services  
including specialties in the areas of:

#### SPINE REHABILITATION

- Spinal evaluation and treatment
- Back School Education
- Postoperative back evaluation and treatment

#### ORTHOPEDICS

- Postoperative joint rehabilitation
- Rehabilitation of musculoskeletal injury
- Foot Orthotic evaluation/fabrication
- Prosthetic training
- TMJ

#### PEDIATRICS

- Evaluation and treatment of premature infants through adolescents
- Cystic Fibrosis Pulmonary and Exercise Programs

#### NEUROSCIENCES

- Chronic Pain Management
- Evaluation and treatment of neurological disorders
- Geriatric Fall Precautions Screening
- Multiple Sclerosis Patient Screening

#### MEDICINE

- Geriatric Assessment
- Arthritis evaluation and treatment
- High Risk Pregnancy
- AIDS Rehabilitation

#### SURGERY

- Amputee Rehabilitation
- Early postoperative intervention
- Postoperative organ transplantation rehabilitation

#### ONCOLOGY

- Rehabilitation Post Bone Marrow Transplantation
- Leukemia Rehabilitation

#### CARDIAC REHABILITATION

- Postoperative intervention
- Postoperative Heart, Lung and Heart/Lung Transplant Rehabilitation
- Phase 1 Cardiac MI program

#### PSYCHIATRY

- Pediatrics through Geriatrics
- Inpatient, Day Hospital, Outpatient

#### HANDS

- Static and Dynamic Orthotics
- Hand Surgery/Cumulative Trauma Rehabilitation

### THE JOHNS HOPKINS HOSPITAL

For more information on our inpatient and outpatient programs contact:

**The Rehabilitation Medicine Department**

Osler 159

600 North Wolfe Street

Baltimore, Maryland 21205

(301) 955-5693

# QUALITY

## THE HOPKINS TRADITION

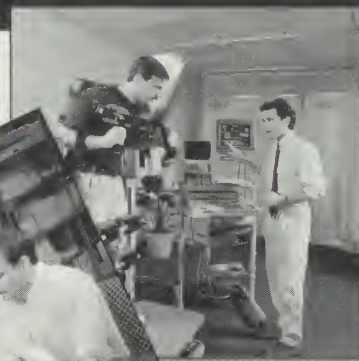
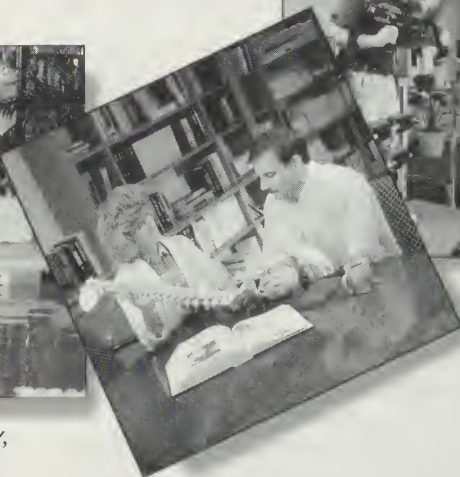
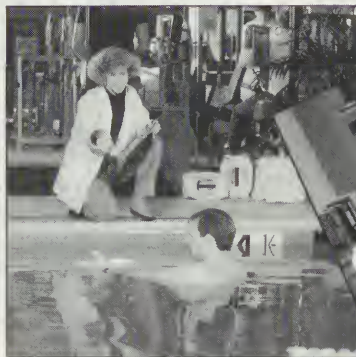


"MODERN REHABILITATION  
TAKES SOPHISTICATED  
EQUIPMENT AND THE  
EXPERTISE OF PHYSICAL  
THERAPISTS WHO NEVER  
FORGET THE HUMAN  
ELEMENT BEHIND EVERY  
PATIENT

CENTER PHILOSOPHY

WHEN THE PEOPLE WHO OWN A TREATMENT FACILITY ARE PHYSICAL THERAPISTS, IT SHOWS. AT THE MARYLAND CENTER FOR PHYSICAL THERAPY, IT SHOWS IN OUR STATE OF THE ART FACILITY AND IN THE FINEST EQUIPMENT AVAILABLE. AND IT SHOWS IN THE LEVEL OF PERSONAL CARE OUR DEDICATED PHYSICAL THERAPISTS PROVIDE.

SO WHETHER YOU NEED ORTHOPEDIC OR NEUROLOGICAL PHYSICAL THERAPY, OR TREATMENT FOR ARTHRITIS OR BACK PAIN, YOU CAN COUNT ON OUR EXPERTISE AND OUR CARING HANDS. LET US SHOW YOU THE SCIENCE AND ART OF THE HEALING PROCESS.



MCPT OWINGS MILLS • 2 PARK CENTER COURT, OWINGS MILLS, MD 21117  
301-363-7123 FAX 356-4153

MCPT HUNT VALLEY, P.A. • SHAWAN PLACE, 5 SHAWAN RD., HUNT VALLEY, MD 21030  
301-771-1777 FAX 771-1780

MARYLAND  
CENTER FOR  
PHYSICAL THERAPY





### Cancer Immunotherapy Part I: Basic and Early Clinical Trials

While surgery remains the most effective method in the management of most cancers, it has not been sufficient to handle the problem alone. Only about one-third of cancer patients will be cured by surgical resection only. Therefore, intensive efforts have been devoted to the development of new modalities for treating cancer. As most cancer patients die of distant metastases, systemic treatment modalities such as hormonal therapy, chemotherapy, and immunotherapy are being investigated.

There does exist clinical evidence of tumor immunity. Spontaneous regression of the disease may occur even in its metastatic stages; although the phenomenon is rare, it is well recognized in patients with hypernephromas and melanomas. In addition, fetuses of mothers with metastatic melanoma never develop melanoma and these fetuses are immune to developing melanoma both at the cellular and humoral levels.

Recurrences, however, do occur ten to thirty years after curative surgery. While such a phenomenon is well recognized in breast cancer, it occurs in all malignancies with varying degree. In reality, five-year survival is of no significant value in any malignancy other than in large bowel cancer. The presence of immune cells (i.e., mononucleated cells) at the primary site and histiocytes in the regional lymph nodes of cancer patients has been observed. It has been claimed that both findings carry a good prognosis. Tumor cells may be present in the peripheral circulation without tumor development or metastasis. The slow growth of tumors has been attributed to tumor cell death via immune surveillance. In addition, when immune surveillance fails, such as in aging, transplantation, and malnutrition, tumors of various types do develop.

It must also be remembered that cancer, except for genetically-related cancer, is more prevalent in older individuals.

In an effort to increase the host immune reactivity to cancer, several attempts have been made to develop immunotherapies for the treatment of cancer, including:

1. *Bacterial injections:* In the thirties, Dr. Cooley introduced bacterial injections into some tumors. Sixty years later, tumor necrosis factor (TNF) was identified and synthesized to recombinant tumor necrosis factor (rTNF) which is now being utilized alone, with chemotherapy, or more recently, with immunotherapy.
2. *Tumor cells and tumor extracts:* Postoperative immunization with fresh tumor cells (autologous or allogenic cells) or tumor cell lysates has been utilized as a tumor vaccine. Cultured tumor cells were also used until it was discovered that cultured tumor

cells may change antigenicity. In addition, some tumor cells may be protected by lipoproteins. Therefore, to strip that lipoprotein, neuraminidase-treated tumor cells were utilized in the immunization. Concanavalin-A was employed to increase antigenicity of tumor cell surface antigens.

#### 3. *Lymphocyte transfusions:*

- a. Fresh or cultured lymphocytes were transfused in cancer patients with the hope of increasing their general immunity.
- b. Another approach was the utilization of neuraminidase-treated lymphocytes, again to remove the lipoprotein coating on the surfaces of the lymphocytes to make them more competent immunologically. (Unfortunately, none of these approaches showed any effect. While we can transfer specific immunity to a specific disease, there is no evidence that we can transfer general immunity which will specifically affect a single disease.)
- c. Subsequently, cross tumor transplants and cross transfusions were attempted. In this approach, tumors from two individuals were cross-transplanted and the lymphocytes from these individuals were cross-transfused. This approach was premised by the fact that such tumors would be rejected on the basis of histoincompatibility and with the hope of recognizing tumor-associated antigens; consequently, cross transfusion would transfer tumor immunity. This approach had limited success.
- d. Immune-ribonucleic acid (RNA), obtained from the lymphoid tissue of animals sensitized to human tumors, was administered to the patients. This resulted in double hetero-immune rejection. Insufficient numbers of patients were studied for this to be conclusive.
- e. The use of the transfer factor of Lawrence was also attempted. A transfer factor of 11,000 molecular weight was obtained from the lymphocytes of breast cancer patients who had no evidence of recurrence or metastasis five years after surgery. The factor was administered to the patient with metastatic breast cancer, but failed to show any effect. It later became evident that patients with local and regional disease do recognize their tumors preoperatively, a phenomenon that disappears in the immediate postoperative period. These patients received extract of unsensitized lymphocytes and displayed no clinical evidence of response.

4. *Immune reconstitution:* Two agents have been used to reconstitute nonspecific immunity in cancer patients. Levamisole was utilized in combination



# YOCON®

## YOHIMBINE HCl

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon® is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

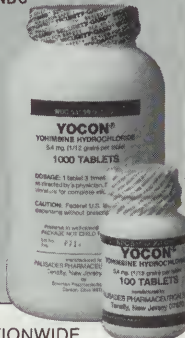
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

#### References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE AT PHARMACIES NATIONWIDE

**PALISADES  
PHARMACEUTICALS, INC.**

219 County Road  
Tenafly, New Jersey 07670  
(201) 569-8502  
1-800-237-9083

with chemotherapy in breast and large bowel cancers. Thymosin was administered with radiation therapy. Both agents gave variable results.

5. *Immune stimulation* has been tried in various malignancies with the hope of stimulating general immunity. The two most commonly used agents were bacille Calmette Guerin (BCG) and *C. parvum*. While both failed to show systemic benefit, BCG has been an effective treatment as an intralesional injection in the management of local recurrence and limited satellitosis in cutaneous melanoma.
6. *Interferon therapy* has been successful in the management of some leukemias.

**E. GEORGE ELIAS MD, PhD**

Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland Medical Systems

*Tumor conferences are held weekly on Tuesday between 8 and 9 a.m. in Room S9A06 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call the number 301-328-5224 by noon Monday to be placed on the schedule: Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD.*



## Bright Oaks Courtyard

2021 EMMORTON ROAD (RTE. 924) • BEL AIR, MD 21014

**20,000 Square Ft. Professional Office Buildings**

- Easy Access to I-95 & Rt. 24
- Close Proximity to residential & commercial developments
- Customized suites
- HVAC gas, elevators, ample parking
- Competitive rates
- Tenant allowances

**Contact: C.H. Goldberg, MT-(ASCP); CIBN**  
(301) 893-1800  
1-800-767-7070

Developed by:

**WARD & LAMBDIN**  
REAL ESTATE DEVELOPERS



ROBERT WARD REALTY INC.



## A Medical Lexicon from Mythology

Bart Gershen MD

In last month's essay, I mentioned the fabled Greek Amazons and their nominal relationship to a South American river. Geographic names derived from mythology are rather common. Examples include: **Phoenix** (Arizona), named for the handsome Egyptian bird which built a funeral pyre and rose eternally from its own ashes; **Europe**, designated for *Europa* who was kidnapped by Zeus; **Olympia** (Washington), for the legendary heights of *Mount Olympus*, and **Rome** built by *Romulus*, the son of Mars. Each was the celebrated descendant of an ancient myth.

Medicine, too, has a lexicon which has descended from old legends. The Greek god of medicine was *Asclepius* (also known as *Aesculapius*). He was the son of Apollo, and was taught the art of healing by Chiron the Centaur. Asclepius is usually portrayed in a flowing white robe, carrying a cane with a serpent coiled around it. The **caduceus** - a winged staff with two serpents entwined about it is recognized as the symbol of medicine, but actually represents the emblem of a herald or courier; it was the staff of *Mercury*, messenger to the gods. In the mists of history, an egregious error has been committed -- the double-serpented rod, emblematic of Mercury, was substituted for the single-serpented one, which in fact represented Asclepius.

This is not terribly disturbing, until you consider that Mercury represented, among other things, the god of trade, of commerce, and of wealth, as well as the god of thieves. His duties, moreover, included conducting the souls of the dead to Hades.

We should, perhaps, have chosen our cardinal symbol more circumspectly.

Asclepius had two daughters, *Hygeia* and *Panacea*, who are likewise renowned in medical circles. You may also remember that Asclepius was physician to Jason and his Argonauts, all of whom were sent on a dangerous quest to obtain the Golden Fleece. They found it in *Colchis*, a region at the eastern end of the Black Sea - now part of Georgia, USSR.

A lovely flower grows in that part of the world. A member of the lily family, it blooms in late autumn and displays an array of pink, purple, and white petals. The plant is named for the region: *Colchicum autumnale*. Its underground stem is usually quite distended and contains an anti-inflammatory substance. Asclepius used it to treat rheumatism and gout. We call it *Colchicine*.

*Mercury* was called *Hermes* by the Greeks. Among other things, Hermes was the father of alchemy. Alchemists were the first to use intense heat to soften metals. To bind objects together with hot molten ore has, therefore, become known as *hermetic* sealing.

*Aphrodite*, one of the twelve Olympic gods, was famous for her beauty and her notorious adultery. She

was married to the grotesque and repulsive *Vulcan* god of fire (**volcano** and **vulcanism**). Hence, she often imported paramours to gratify her lust - occasionally resorting to **aphrodisiacs** in order to achieve these ends. Among her lovers was Hermes with whom she conceived a son. The baby was named for both parents: *Hermaphroditus*. As he grew into handsome maturity, a water nymph, Salmacis, fell in love with him. She could not tolerate a moment's separation from her sweetheart, so she joined her spirit to his. They occupied the same body, which came to possess both male and female sexual characteristics - a **hermaphrodite**.

*Aphrodite* was known to the Romans as *Venus*. She was the goddess of beauty, the mother of love, and the mistress of pleasures. One of her children was *Eros*, the god of love. A second child was *Hymen*, the god of marriage. The third child was *Priapus*, god of fertility. **Priapism**, **hymen**, and **erotic** are their medical cognates. In addition to her enchanting progeny, Venus has furnished us with a wealth of **venereal** disease as well.

Other characters from ancient mythology have augmented our vocabulary, such as *Psyche*, goddess of the human soul, and *Narcissus*, the beautiful youth who fell in love with his own reflection. One must also include the sea god *Proteus*, who had the ability to assume various shapes. Thus have we termed the bacterial genus **Proteus**, and discovered the origin of that ubiquitous expression of sophomoric rhetoric: "**protean** manifestations of disease."

The Greek god of forests and wild animals was *Pan*. He was patron of shepherds and hunters, and flaunted the ears, horns, tail, and inguinal parts of a goat. The less spectacular aspects of his anatomy were those of a man. He was playful, frisky, lustful, libidinous, and unpredictable. One of his favorite diversions was to frighten unwary travelers as they wandered through his forest; hence he incited **panic**.

*Pan* was one of a group of woodland deities known as *satyrs*. They attended Bacchus, god of wine, and are renowned for a disorder known as **satyriasis**, which requires a goat-like constitution as well. It is the masculine counterpart of **nymphomania**. Pan was also venerated by the Romans, but they renamed him *Faunus*. Debussy's orchestral work, *Prelude a l'apres-midi d'un faune* (Prelude to Afternoon of a Faun), exalted these woodland creatures. In addition, the renowned Swedish physician and botanist, Dr. Carl Von Linne, immortalized them in his seminal classification of plants and animals - calling them flora and **fauna**. (Incidentally, you may recognize this distinguished scientist only by his latinized name: *Carolus Linnaeus*.)

*Saturn* was the Roman god of agriculture. His temple served as the Roman state treasury. Its vestiges can still be found at the west end of the Forum. A great festival, the Saturnalia, was held each December in his honor. It was the most popular and joyful of Roman festivals. Business was suspended, slaves were granted temporary freedom, moral constraints were relaxed, and gifts exchanged. Its influence remains with us today, contrasting with our more civilized hibernial celebrations.

During that era, astronomers became aware of five unique stellar objects. They knew that most stars were "fixed" in position, each relative to the others, and that they rotated nightly from east to west in the dome of the sky. This was true for most stars, but not for five idiosyncratic "stars" which wandered aimlessly through the heavens, apparently pursuing their own enigmatic destinies. The primitive cosmologists called these bizarre objects **planets** (Greek: *planetes* - "wanderer"). One of these - the outermost planet visible to the naked eye - was named **Saturn**, in honor of their god. It was a very slow-moving celestial body, hence the alchemists hypothesized that it must have been made of lead - the heaviest known element of that period. Therefore, to have a **saturnine** disposition means to be heavy, plodding, morose, and rather gloomy.

Furthermore, chronic **lead** poisoning became known as **saturnism**, and since lead blocks the excretion of uric acid, the resulting disorder became known as **saturnine gout**. Of course, the actual Latin word for lead was *plumbum*, from which our chemical symbol **Pb** is derived. This likewise explains the alternate term for lead toxicity - **plumbism**. It also explains why one calls a **plumber** when the pipes leak - since all water pipes were originally fabricated from lead. (That may, in turn, explain the fall of the Roman Empire.) Finally, it explains why the builder constructed your home with such a scarcity of true right angles. He failed to hang a heavy lead weight on a string to obtain a perpendicular - he did not use a **plumb line**.

*Amon* or *Ammon* was the chief god of the Egyptians and patron of the pharaohs. Shortly after Alexander the Great conquered Egypt, his troops constructed a magnificent temple near an oasis in the North African desert. In honor of the chief divinity of each country, they called it the temple of *Zeus-Ammon*.

Desert nights can become quite cold; therefore, fires were often lit to warm the tabernacle. Fuel is scarce in such barren regions, so the worshipers used dry camel

dung as kindling - much as Native American Indians employed buffalo chips.

Over the years, grayish soot from the rising smoke was deposited onto the walls and ceiling of the temple. It solidified into a white crystalline, salt-like substance. In fact, it was known as the "salt of Ammon," or *sal ammoniac*.

In 1774, Joseph Priestley, a Unitarian minister and good friend of Benjamin Franklin, collected a pungent, irritating vapor from crystals of sal ammoniac. He called this new gas **ammonia**. Today we know that sal ammoniac is **ammonium chloride**. We also know that loss of one of the three hydrogen atoms surrounding ammonia results in an **amino** group -  $\text{NH}_2$  - the basis for all **amino acids** and for all protein-based life. Accordingly, each of us carries with us the lexical seeds of the Egyptian god *Ammon*.

Finally, there is the legend of the *Sphinx* - the fabled monster which brandished the head and breast of a human, and the body of a lion. It guarded the city of Thebes and as each traveller approached the gates to the city, the ogre would stop him and ask a mysterious riddle. If the wayfarer failed to solve the conundrum, the Sphinx killed him instantly by crushing him to death.

One day a man approached the city. His name was *Oedipus*. The Sphinx asked his riddle: "What is it that walks on four feet in the morning, two feet at noon, and three in the evening?" Oedipus responded correctly: "It is man, who crawls on all four feet in youth, stands on two in maturity, and uses a crutch in old age." The furious Sphinx, in a violent rage, strangled himself to death - giving paradoxical life to the word **sphincter** - that which squeezes.

It may also be of some interest to note the origin of the young hero's name. When Laius, the king of Thebes, learned that his wife Jocasta was to have a child, he consulted an oracle. The seer prophesied that this infant son would grow to manhood, murder his father Laius, marry his mother Jocasta, and ascend to the throne. Laius immediately ordered the infant destroyed. He gave the child to a herdsman who **pierced the baby's feet** and left him dangling from a mountain cliff, exposed to the elements. A passing shepherd took pity on the unfortunate infant, saved his life, and the rest, as they say, is history.

The child was named **Oedipus** - from the Greek *oidein*: "to swell" (as in **oedema**) and *pous*: "foot."

The boy with **swollen feet**. ■



**Howard A. Zacur MD, PhD**, a specialist in infertility, is the new Director of the Division of Reproductive Endocrinology at The Johns Hopkins Medical Institutions. Well-known as a clinician and a researcher, Dr. Zacur is also an Associate Professor and the Deputy Director of the Department of Gynecology and Obstetrics, as well as holding a joint appointment with the Department of Population Dynamics at the School of Public Health.

A graduate of Harvard College and the University of Miami School of Medicine, Dr. Zacur completed his residency in gynecology and obstetrics while also receiving his PhD in reproductive biology. He subsequently completed a fellowship in reproductive endocrinology in the Department of Gynecology and Obstetrics.

The first recipient of the annual J. Donald Woodruff Teaching Award, Dr. Zacur is a member of the editorial board of *Current Opinions in Obstetrics and Gynecology* and *Prologues* (a national newsletter on clinical and scientific developments in endocrinology), an ad hoc reviewer for nine journals, and author of more than eighty publications.



**Paul N. Manson MD**, an internationally known expert in craniofacial surgery, the repair of facial injuries, and the fastening of fractured bones, has been appointed Chief of the Division of Plastic Surgery at The Johns Hopkins School of Medicine and Chief of the Plastic Surgery Service at The Johns Hopkins Hospital. A Professor of plastic surgery at Hopkins since 1987, Dr. Manson also serves as Director of the Plastic Surgery Service at the Maryland Institute of Emergency Medical Services Systems.

Dr. Manson, whose research interests include bone healing, the metabolism of tissue that has had a damaged blood supply, and the physiology of facial injuries, received his BS in analytical chemistry and his MD from Northwestern University. He served a surgical internship at Boston City Hospital, and a general surgery residency at the Boston City and the New England Deaconess Hospitals. He was a fellow at the Lahey Clinic in 1973, and completed his plastic surgery residency at Hopkins in 1978.

A member or fellow in more than two dozen medical societies, he is President of the John Staige Davis Society of Plastic Surgeons of the State of Maryland, and serves as a consultant for the Veterans Administration Hospital in Baltimore and the Walter Reed Army Medical Center in Washington, DC. He has served on the editorial board or as a reviewer for eight peer-reviewed medical journals including the *Journal of Craniofacial Surgery* and *Thermology*. ■



## PHYSICIAN'S RECOGNITION AWARD

### Recipients

During the month of February 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

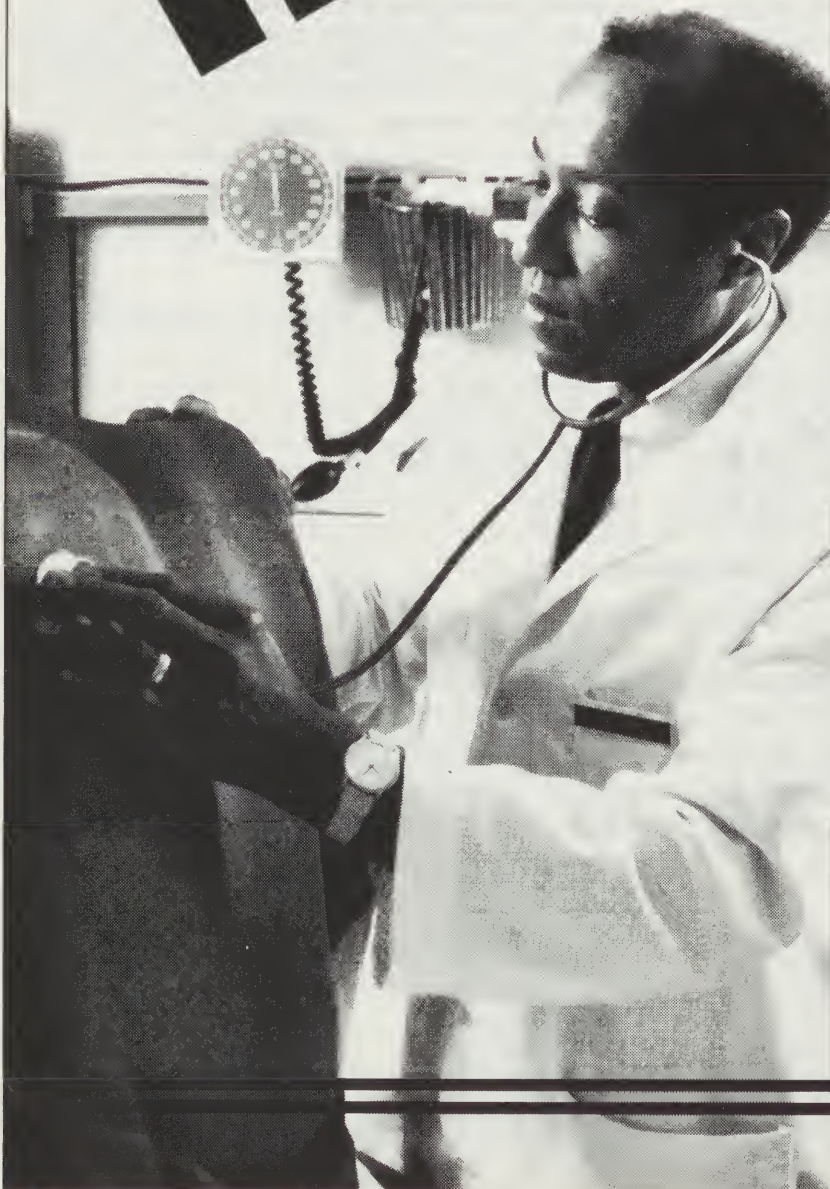
Abundo, Glenn Paulino  
Ballesteros, Ruben F.  
Baruch, Jack  
Berg, Elliott Mordecai  
Black, Alan Scott  
Cohn, Howard David  
Colgan, Diane Leslie  
Eng, John Sun-Hung

Farhoudi, Habibollah  
Franks, Denis  
Hansen, Frederik C.  
Haverback, Chester Z.  
Kaplan, Alan Seth  
Kaufman, William H.  
Kay, Stephen Robert  
Klein, Michael Elihu

Letterman, Gordon S.  
Matjasko, Martha Jane  
McGibbon, Bernard  
Miller, Marilyn Diane  
O'Brien, David Shepard  
Orlando, Joseph C.  
Palin, William Edwin  
Ratino, John Manfred

Reisin, Jorge Horacio  
Schwartz, Michael Allen  
Wilensky, Robert Joel  
Wilhelmsen, Hans Richard  
Wongananda, Boondharm

# AIM HIGH



## **SPECIALIZE IN AIR FORCE MEDICINE.**

ER Physicians. Radiologists. OB/GYNs and other specialists!

Today's Air Force gives you the freedom to specialize without the financial overhead of running a private practice. Talk to an Air Force medical program manager about the tremendous benefits of becoming an Air Force medical officer:

- No office overhead
- Dedicated, professional staff
- Quality lifestyle and benefits
- 30 days vacation with pay each year

Examine your future in the Air Force. Learn if you qualify. Call

**USAF HEALTH  
PROFESSIONS**

**(301) 981-7897  
COLLECT**





## HCFA Regional Meeting: Physician Payment Reform

*Roseanne M. Matricciani RN, Esquire and Angelo J. Troisi FACHE*

In its efforts to keep the physicians of Maryland informed about issues concerning physician payment reform (PPR), Med Chi hosted a regional meeting on February 11, 1991 at the Faculty Building. Representatives from the Health Care Financing Administration (HCFA), led by Maurice Hartman, Regional Administrator, updated Region III's medical societies on PPR issues.

One of the first items discussed was Comparative Performance Reports (CPR). CPR letters have been released to physicians in an informational effort to alert those doctors who have billed Medicare for an unusually large number of services or procedures in comparison to their peers. In New Jersey and in Region III (which consists of Maryland, Pennsylvania, DC, Delaware, and Virginia), only 562 physicians received CPR letters. This number is approximately 8 percent of the physicians in the Region III/New Jersey area. Thirty percent of the physicians receiving CPR letters responded to the letter and provided the carrier with changes in coding, billing, specialty certification, etc., in order to correct and update the carrier's data base.

At the present time, the Regional Office indicates that there are a very small volume of physicians for whom ten or more claims have been submitted by beneficiaries. This fact is true nationwide and HCFA has instructed carriers to send out educational letters to those physicians who have not been complying with the law.

In an effort to address the "physician hassle factor," HCFA started a demonstration project beginning March 1, 1991 which will continue through March 31, 1992. This project involves releasing Medicare's payment screens in thirteen states. The project will study seven national screens -- routine foot care, comprehensive office visits, skilled nursing facility visits, chiropractic care, intermediate hospital visits, consultations, and comprehensive visits in all settings. However, the number and choice of screens to be released will vary from carrier to carrier. The states involved in the project are Alabama, Arkansas, California, Colorado, Connecticut, Georgia, Idaho, Indiana, Kansas, Kentucky, New York, Texas, and Wisconsin. HCFA is releasing these carrier screens to physicians to test physicians' responses to this information. HCFA is also trying to achieve consistency between carriers' screens and the Peer Review Organization's (PRO's) screens.

Furthermore, in an effort to address physician problems, carriers have been given more money by HCFA to train personnel and provide more information to the doctors. Maryland Blue Cross/Blue Shield has received additional funds to cover costs associated with this endeavor. At the present time, there is not enough money in the budget to provide a toll-free (800) number to physicians who have inquiries about their claims.

HCFA announced the creation of a new Advisory Committee on Medicare-Physician Relationships. This Committee will be a separate and distinct group from the Medicare Practicing Physician Advisory Council which was established by the anti-hassle legislation included in the Omnibus Budget Reconciliation Act of 1990 (OBRA 90). The new Advisory Committee will be chaired by Dr. Nancy Gary, Senior Medical Advisor to the HCFA Administrator, and will include seven practicing physicians representing primary care, internal medicine, and surgical specialties. While the Medicare Practicing Physician Advisory Council is expected to be a standing advisory group, Dr. Gary's Committee is only expected to meet five times and cease existence after December 31, 1991. The Advisory Committee is an effort by Health and Human Services Secretary Louis Sullivan MD and Dr. Gail Wilensky to undertake a retrospective review and obtain physician input on existing Medicare policies.

In an attempt at standardization of fees, HCFA has identified the need to define place of service and type of service. HCFA's most controversial effort, however, involves its rebundling project which started February 1, 1991. Under this project, certain codes are being identified that can be bundled together. This process will change billing procedures so that procedures will not be billed separately. The next phase of rebundling will occur in the summer.

Another topic of discussion was the Medicare Volume Performance Standards (MVPS). The MVPS for 1990 was 9.1 percent. Because of the cutbacks under OBRA 90, however, the MVPS for 1991 will be 7.3 percent for *all* services, but the increase is limited to 3.3 percent for surgical procedures and 8.6 percent for non-surgical procedures. This MVPS is smaller than the rates recommended by HCFA and the Physician Payment Review Commission (PPRC).

HCFA also stated that the geographic practice cost index (GPCI) for malpractice is being revised since its publication in the model fee schedule. While the PPRC has recommended that all but eleven states should have statewide GPCIs, at the present time, only Oklahoma, Kentucky, and Louisiana will have statewide GPCIs.

In a further effort to standardize fees, HCFA published its national standardization of global surgery policy in the January *Federal Register*.<sup>1</sup> Under this policy, global surgery will include the following:

1. All normal pre-operative visits, in or out of the hospital, made by the primary surgeon from the time of the consultation when the decision to have surgery is made;
2. Intra-operative services that are normally a usual and necessary part of a surgical procedure;



3. Complications following surgery, except where highly unusual circumstances could not have been anticipated;
4. Postoperative visits within ninety days after the date of surgery; and
5. Postoperative services related to minor surgery or scopy procedures occurring within thirty days of the date the procedure is performed.

The initial evaluation and/or consultation by the primary surgeon will be paid for separately. According to HCFA, this service is a distinct, readily identifiable service that is furnished whether or not surgery is performed. HCFA's deadline for commenting on the global surgery policy was March 11, 1991.<sup>2</sup>

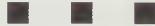
In April 1991, the proposed fee schedule regulations will be published in the *Federal Register*. The comment period for these regulations should be sixty to ninety days. In October 1991, the final fee schedule regulations will be published in the *Federal Register*.

While the meeting with HCFA provided the medical societies with many informational items and allowed the societies to comment upon and question various policies, everyone agreed that another meeting would be beneficial. Therefore, HCFA will be holding another regional meeting in Washington, DC so that they can continue to update and communicate with the medical societies.

Med Chi is committed to keeping the physicians of Maryland informed about Physician Payment Reform (PPR). The Faculty will continue to make HCFA aware of the concerns of Maryland physicians and the effects of PPR on quality of care, practice, and access issues.

#### References

1. Medicare Program; National Standardization of "Global Surgery" Policy, 56 Fed. Reg. 5, 699 (1991).
2. The Medical and Chirurgical Faculty of Maryland commented on this policy, along with other Maryland surgeons who provided Med Chi with input on this matter.



### Suburban Hospital Hosts Medical Students From The Union of Soviet Socialist Republics

On Friday, December 14, 1990, four senior medical students from the Soviet Union visited Suburban Hospital. The students were from the First Moscow Medical Academy -- the oldest medical school in the Soviet Union. They participated in two medical conferences as well as making ward rounds. The Soviet students, Yaroslav Grusha, Andrew Osipov, Maria Dolgopiatove, and Natalia Polushkina spoke English fluently and were animated participants during the bedside teaching rounds, impressing the Suburban Hospital physicians who were acting as their guides and tutors.

Dr. Harvey Resnick, a member of the Department of Psychiatry, was responsible for arranging their visit to our hospital. Dr. Resnick is the mid-Atlantic representative for the exchange program based at Columbia Presbyterian Hospital in New York City.

Dr. Eugene P. Libre, Medical Training Officer introduced the students at the end of the Internal Medicine Clinical Review Conference which had been given by Dr. Alan Singer on "Complications in The Diabetic Foot." Each student spoke for a few minutes about their origins, what their interests in Medicine were, and what they had done in the United States for the past three months as part of the exchange program.

"Use of Light Therapy in the Treatment of Seasonal Affective Disorders," was presented by Douglas Moul MD from the Clinical Psychopharmacology Branch of



Left to right: Douglas Moul MD, Gordon Wallace PhD, Eugene P. Libre MD, Andrew Osipov, Maria Dolgopiatove, Harvey Resnick MD, Natalia Polushkina, and Yaroslav Grusha. (Photo courtesy of John Davidson and Hilary Murphy, Public Relations Department, Suburban Hospital)

NIMH, and Gordon Wallace PhD, President of Biobrite, Inc. during Psychiatry Grand Rounds. The conference showed how to diagnose and treat these disorders using light therapy. (The photograph shows Dr. Wallace wearing the light therapy device used in treatments.)

Drs. Eugene P. Libre, Richard H. Pollen, James Salander, David Satinsky, James Kneppshield, Mohasan Gharib, and Joseph Mock showed the students how a typical American hospital cares for patients.



## Med Chi's 1991 Legislative Rally

**L**ieutenant Governor Melvin A. Steinberg addressed the more than eighty people who attended Med Chi's legislative rally in Annapolis on Tuesday, March 5, 1991. During his speech, the Lieutenant Governor said he was impressed by the number of physicians participating in the rally and emphasized the importance of physicians representing their profession before the legislature. Senate President Thomas V. "Mike" Miller also spoke on the need for physicians to maintain a voice in Annapolis and pointed out that organized medicine in Maryland originated in the legislature.

Med Chi President Reynaldo L. Lee-Llacer MD elaborated on the message sent by Lieutenant Governor Steinberg and Senator Miller stating... "Organized medicine gets its strength from the unity of purpose of all physicians." According to Dr. Lee-Llacer, that purpose is to uphold standards for high quality medical care.

Med Chi supported several bills promoting better health for Maryland's citizens. Physicians at the rally testified on a number of bills including several anti-smoking bills in the House Ways and Means Committee. Med Chi lobbyist, Gerard E. Evans, Esq., and Robin Shaivitz, lobbyist for the Maryland Divisions of the American Cancer Society, American Lung Association, and American Heart Association, encouraged physicians to speak out in favor of several anti-smoking bills. Included among this legislation

are three bills that would restrict the sale of tobacco products via vending machines (H.B. 39, H.B. 662, and H.B. 663); two bills that would place additional taxes on all tobacco products (H.B. 695 and H.B. 707); and one bill that would revoke licenses for vendors who sell cigarettes to minors (H.B. 673).

Regarding Med Chi's strong support of the anti-smoking legislation, Senate Finance Committee Chairperson Thomas Patrick O'Reilly said, "It's good to see so many doctors taking a stand against smoking."

Physicians also testified before the Senate Finance Committee and House Environmental Matters Committee regarding other legislation. Many of the bills discussed would adversely affect the practice of medicine in Maryland, such as H.B. 678, a bill that would amend current law and require physicians whose practice is considered unconventional or experimental to have their patients sign an informed consent form.

Other legislators who spoke during the rally include, House Environmental Matters Committee Vice Chairperson Virginia M. Thomas, Senator Paula C. Hollinger, Delegate Joan B. Pitkin, Senator Janice A. Piccinini, Delegate Jennie M. Forehand, Delegate Rosemary M. Hatam Bonsack, Delegate Marsha G. Perry, and Delegate Joseph Vallario. Prince George's County State's Attorney Alex Williams also addressed the physicians. ■



Maryland Lieutenant Governor  
Melvin A. Steinberg



Maryland Senate President  
Thomas V. "Mike" Miller



Med Chi President  
Reynaldo L. Lee-Llacer MD

**The AMA  
Hospital Medical Staff Section  
Seventeenth Assembly Meeting  
June 20 - 24, 1991  
Chicago Marriott Hotel  
Chicago, Illinois**

**Highlights of the Annual Meeting will include:**

- an educational program on the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and Practice Parameters;
- presentation by the AMA-HMSS Governing Council of reports on medical staff issues including Evaluation of the Hospital Medical Director and Criteria for Evaluating the Performance of the Hospital Medical Director, PRO Required Education of Hospital Medical Staff and Patient Responsibility of On Call Physicians;
- an information exchange on PRO and Managed Care Review;
- AMA-HMSS Governing Council elections for the positions of Delegate, Alternate Delegate and one Member-At-Large.

**For Information Contact:**

Department of Hospital Medical Staff Services  
American Medical Association  
515 North State Street  
Chicago, Illinois 60610  
Phone (312) 464-4754 or 464-4761



**HMSS**



## MISCELLANEOUS MEETINGS

- May 8-10** 193rd Annual Meeting of the Medical and Chirurgical Faculty of Maryland - "American Medicine Today: Perspectives from Maryland," at the University of Maryland, University College, Center of Adult Education, College Park, MD. 15 Cat 1 AMA/PRA credits. Fee: no charge for Med Chi members; \$225 for nonmember physicians. Info: Michael Moran, Convention Director, 1-800-492-1056 in MD, or 301-539-0872.
- May 15-17** Clinical Auscultation of the Heart, sponsored by the American College of Cardiology at the Georgetown University Medical Center, Washington, DC. Info: 301-897-5400.
- May 15-19** 43rd Annual Meeting and Scientific Session of the Maryland Academy of Family Physicians, at the Sheraton Ocean City Resort and Conference Center, Ocean City. 30.75 Cat 1 AMA/PRA credits; 30.75 AAFP prescribed hours. Fee: \$195 members; \$225 nonmembers; \$110 paramedicals. Info: Brad J. Cooper MD, 301-747-1980.

Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.

- May 2** Breast Conservation Surgery for Carcinoma  
**May 9** New Advances in Treatment of Asthma  
**May 16** Functional Endoscopic Sinus Surgery  
**May 23** The Complicated Coronary Artery Bypass Patient  
**May 30** Latest Advances in Abdominal Radiologic Interventions  
**June 6** Recent Advances and Update in Oral & Maxillofacial Surgery: Dental Implants and Orthognathic Surgery  
**June 13** Mechanisms and Treatment of Head Injuries  
**June 20** Update in Pediatric Orthopedic Surgery  
**June 11** Surgical Management of Mitral and Aortic Valve Disease

American College of Emergency Physicians, 1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.

- May 2, June 27** Board of Directors  
**May 10** Annual Meeting, in conjunction with Med Chi's Annual Meeting  
**June 6** Executive Committee Meeting

### Information for Authors

Manuscripts may be sent to Editor, **MMJ**, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

#### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

Include full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles.

Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in **MMJ** is protected by copyright and may not be reproduced without the written permission of both the principal author and **MMJ**.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.

## THE JOHNS HOPKINS MEDICAL INSTITUTIONS

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

<b>May 11</b>	<b>Laser Technology in Retinal Diseases -- Current Concepts (includes hands-on laboratory)</b> , sponsored by the Wilmer Ophthalmological Institute. 7.5 Cat 1 AMA/PRA credits for lectures and lab. Fee: \$225. 4 Cat 1 AMA/PRA credits for lectures only. Fee: \$100. Info: 301-955-2959.
<b>May 15-19</b>	<b>Third Baltimore Perinatal Colloquium</b> , at the Johns Hopkins University and University of Maryland School of Medicine. 24 Cat 1 AMA/PRA credits; ACOG cognates available. Fee: \$450 physicians; \$250 residents. Info: 301-955-2959.
<b>May 16-17</b>	<b>Pediatric Allergy and Immunology for the Practitioner</b> . AMA/PRA credits pending. Fee: \$195. Info: 301-955-2959.
<b>June 3-14</b>	<b>The Fourth Annual Summer Institute in Environmental Health Studies</b> . Info: Dr. Jacqueline Corn, 301-955-2609.
<b>June 10-12</b>	<b>Advanced Pediatric Life Support Courses</b> . 20 Cat 1 AMA/PRA credits; 20 AAP PREP credit hours. Fee: \$495. Info: 301-955-2959.
<b>June 13-14</b>	<b>Design and Analysis Issues in Clinical Trials</b> . 14.5 Cat 1 AMA/PRA credits. Fee: to be announced. Info: 301-955-2959.
<b>Continuously Throughout the Year</b>	<p><b>Visiting Preceptorship in Pediatric Critical Care Medicine</b>. Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. Info: 301-955-2959.</p> <p><b>Ophthalmic Electrophysiology Technician Training Course</b>. Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. Info: C. Kearney 301-955-2959.</p> <p><b>Ophthalmology Grand Rounds</b>. Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700.</p> <p><b>Neuro-ophthalmology Conference</b>. Held twice per month. Info: 301-955-5700.</p> <p><b>Cornea Conference</b>. Held monthly. Info: 301-955-5700.</p> <p><b>The Department of Radiology and Radiological Sciences</b> offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.</p> <p><b>Visiting Physicians</b>. Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.</p> <p><b>Johns Hopkins Medical Grand Rounds</b>. Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.</p> <p><b>Microsurgery Training at The Johns Hopkins Hospital</b>. One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.</p>



# UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

- May 2** **Eleventh Annual Abraham H. Finkelstein Lecture on The State of the Family: An Environmental Perspective**, at the Medical School Teaching Facility. Cat 1 AMA/PRA credits available. Info: Bonnie Winters, 301-328-6777.
- May 2-5** **4th Annual Trauma Anesthesia and Critical Care Symposium**, at the Hyatt Regency, Baltimore, MD. 25 Cat 1 AMA/PRA credits. Fee: \$495/\$550. Info: 301-328-2628.
- June 5** **Subspecialty Care in General Practice**, at the University Club, Baltimore, MD. 1 Cat 1 AMA/PRA credit per date. Fee: \$50. Info: 301-328-3103.
- June 7-8** **Current Practical Concepts in Endocrinology and Metabolism**, at Harbor Court Hotel, Baltimore, MD. 10 Cat 1 AMA/PRA credits. Fee: \$150.
- June 23-28** **17th Annual Family Medicine Review Course**, at the Carousel Hotel, Ocean City, MD. 20+ Cat 1 AMA/PRA credits; 20+ AAFP prescribed hours. Fee: \$395.
- June 27-28** **10th Annual Update in Obstetrics and Gynecology**, at the Annapolis Waterfront Hotel, Annapolis, MD. 14 Cat 1 AMA/PRA credits; 14 ACOG cognates. Fee: \$225.
- June 28-30** **Dermatology Days**, at the Carousel Hotel, Ocean City, MD. 14 Cat 1 AMA/PRA credits; 14 AAFP prescribed hours. Fee: \$250.

## Continuously Throughout the Year

**University of Maryland Dean's Conferences** - Held monthly, October through April. Designed for the family/general practitioner and internist. Each conference highlights different clinical departments placing emphasis on the practical methods being used and researched at the University of Maryland. Extension programs are being planned to complement the programs held on the University's Baltimore campus.

**Visiting Professor Program** - A directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunities for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Hour-for-hour Cat 1 AMA/PRA credits available. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.

## Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of the *Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel  
MMJ 1211 Cathedral Street  
Baltimore, MD 21201

### Old Address

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Signature: \_\_\_\_\_

### New Address

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_  
Date: \_\_\_\_\_

# Q

## If these are your Questions:

What is meant by impairment?

When considering self-disclosure,

what issues should be taken into account?

How will others react to my

self-disclosure?

Should I tell my colleagues?

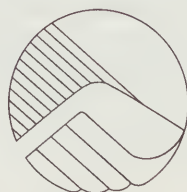
What should I tell my patients?

What should I say on applications for  
privileges, licensing, etc.?

# &

# A

## The Physician Rehabilitation Committee Has the Answers



For a free copy of "To Disclose or Not to Disclose," a brochure of questions and answers on the topic of self-disclosure for the physician recovering from impairment or illness, published by the Physician Rehabilitation Committee of the Medical and Chirurgical Faculty of Maryland as a service to all Maryland physicians, members and non-members, write to Med Chi, Physician Rehabilitation Committee, 1204 Maryland Avenue, Baltimore, MD 21201 or call (301) 962-5580 or toll free (800) 992-7010.



## BOOK REVIEW BOOK REVIEW BOOK REVIEW BOOK REVIEW BOOK

*Transformations in American Medicine*. Lester S. King MD. Baltimore: The Johns Hopkins University Press, 1990, 243 pages. \$38.00

The author lists two of his previous publications in the "Notes" following the manuscript: *The Medical World of the Eighteenth Century* (1958) and *The Philosophy of Medicine: The Early Eighteenth Century* (1978). This text appears to be a collection of his references from his previous publications and from literature reviews over many years. The "Notes" are both extensive and excellent.

The author cites references from Galen (130-200 A.D.) to Cecil's *Textbook of Medicine* (1985) and discusses the progress of European as much as that of American medicine. A more appropriate title for this book, based on its content and approach to medical progress, would have been *The Philosophy of Medicine*.

Neither the purpose of this text nor the audience for which it is intended is apparent to this reviewer. The author has done considerable research in the field of medical history, but his discursive style of writing diminished the reader's interest. The pleonasm and repeated suggestions of what will be discussed in each subsequent chapter are annoying. Much discussion is given to the classification and characterization of fevers but there are almost no references to childbirth,

surgical, anesthesia, or orthopedic progress in medical care, which gives a lack of balance to the text.

*Transformations in American Medicine*, because of its excellent "Notes," belongs in the library of anyone interested in the history of medicine. It is not, however, practical or useful for the practicing physician or medical student.

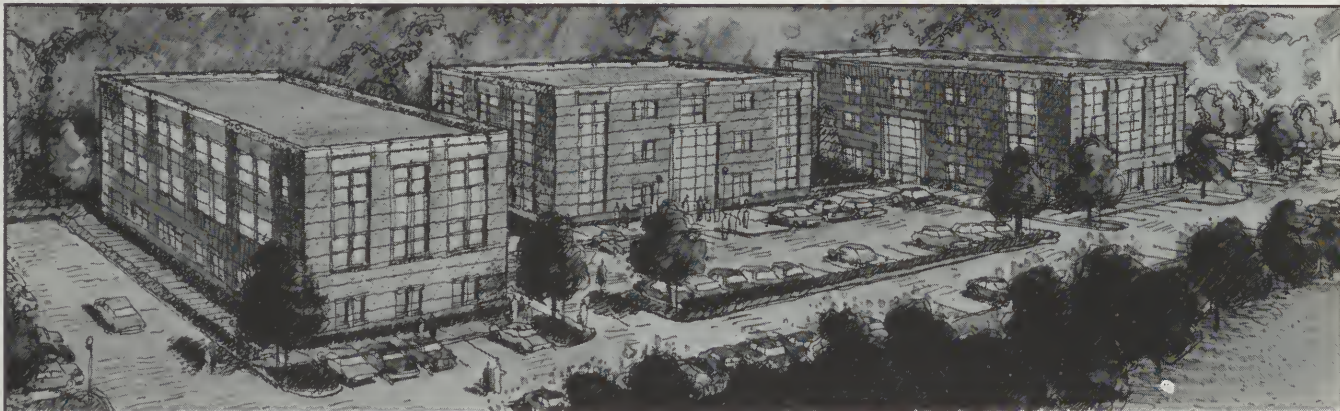
DEWITTE E. DELAWTER MD

Reviewer

### PHYSICIANS:

M.D.'s with general medical, surgical, or Family Practice background to work as urgent care physicians in busy hospital Emergency Department. Part-time/full-time positions available. Competitive salary; flexible hours.

For details, contact: Dan K. Morhaim, M.D.  
Franklin Square Hospital Center  
9000 Franklin Square Drive  
Baltimore, MD 21237  
(301) 682-7046



### FOR SALE

Owning your own medical office offers the following advantages:

- Avoid Rent Escalation
- Guarantee Your Practice Location
- Pay Less Personal Taxes
- Build Equity In Real Estate

### ANNOUNCING

A new 45,000 square foot Medical Office Condominium

### ESSEX COMMUNITY MEDICAL CENTER

Superbly located across from Franklin Square Hospital Center

Call: Amtrade International (301) 391-3080, FAX (301) 653-5093



**PHYSICIAN WANTED**

For occupational medicine/personal injury in Baltimore. Excellent salary and benefit package. No nights. Call Barbara 301-685-7790.

**MARYLAND STATE POLICE:  
MEDICAL DIRECTOR**

Challenging opportunity available with the Maryland State Police to serve as the full-time Medical Director with responsibilities for approximately 2,500 employees, both civilian and sworn. Desired individual must be able to provide medical expertise and administer various health and wellness programs for the Agency. Must evaluate and manage medical problems as they arise within the Agency, such as employee selection, fitness for duty, disability, and general health care services. Candidates must possess a Doctorate of Medicine with 3 years postgraduate training and a minimum of 3 years experience in a hospital, private practice, or public health program. Must be Board certified and licensed in the State of Maryland. Full benefit package included. Interested candidates should send resume, references, and salary requirements no later than June 3, 1991 to: Maryland State Police, Personnel Management Division, 1201 Reistertown Rd, Pikesville, MD, 21208 (301-653-4346). EEO/AEE.

**PHYSICIANS WANTED**

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

**FAMILY PRACTITIONER  
WANTED**

Full-time physician desired for expanding family practice in Howard County. BE/BC with Maryland license required. Full range of primary care services in new modern facility. Excellent income, full benefits with malpractice insurance. Potential for partnership. Reply to: Box 4.

**PEDIATRICIAN - HAGERSTOWN**

Four pediatricians seeking BC/BE pediatrician or pediatrician/internist to expand primary care office-based practice with inpatient care, nursery through adolescence. Sub-specialty training encouraged but not necessary. Practice in growing suburban area of 100,000 in Piedmont Western Maryland. Unique opportunity in modern facility with excellent salary and fringe benefits. Openings available now and summer 1991. Contact Ronald E. Keyser, 319 East Antietam St., Hagerstown, MD 21740 (301-790-3620).

**OBSTETRICIANS**

Excellent opportunity for OBSTETRICIANS establishing practice. Supplement your private practice with hospital position. Guaranteed income, opportunity for generating additional compensation (i.e., County OB deliveries; Assisting in Surgery and self-collection for walk-in patient deliveries). Excellent location in prestigious Montgomery County. Modern facility with 24-hour anesthesia and pediatric coverage and assistant for surgery. Progressive hospital environment. Call 301-891-5651.

**S.E. PENNSYLVANIA**

Two BC PEDs seek third for thriving practice. Call 1:4. Affluent Phila suburb offers easy access to city and shore. Teaching appt avail. Generous finan package. Call Bob Templin - 800-842-2050 at Gilbert Tweed Assoc, 1718 Gilpin Ave, Wilmington, DE 19806.

**PRIMARY CARE PHYSICIAN**

Seeking BE/BC Family Practice/Internist. Office-based position to join active internal medicine group located in Central Maryland. Liberal benefit package, competitive salary. Reply with CV to: Box 5.

**CHESAPEAKE BAY**

Additional PED sought for svc area of 30K. Pick your practice - join an estab physician or start your own with good cross covg. Exceptional inc guarantee. Near 3 major cities. Call Bob Templin - 800-842-2050 at Gilbert Tweed Assoc, 1718 Gilpin Ave, Wilmington, DE 19806.

**RETIRING ORTHOPEDIST**

Looking for part-time work. Call 789-7778.

**OFFICE SPACE FOR RENT**

Near Franklin Square Hospital, one suite remaining in Medical Building. Ideal for Orthopedist or Pediatrician. Instant practice, no competition, peer support. 301-687-4400.

**MEDICAL OFFICE**

**FOR SALE OR LEASE**

2000 sq ft in excellent location near Cross Keys in medical office building. Very convenient to most major hospitals. Contact Rick Tucker at 727-8347.

**RIVA BAY OFFICE PROPERTIES, INC.**

**GRAND OPENING MARCH 1ST 1991 • CUSTOM FINISHED MEDICAL SUITES**

**A NEW concept in Medical Office Space**

**Prime, Prestigious Location - Convenient to Baltimore, Washington and Anne Arundel Medical Center**

**Turn Key Operation - Custom Medical Suites finished for medical practice use**

*Ample Free Parking; Janitorial Service Included; Receptionist, Spacious Central Waiting Area;*

*Court Yard; Signage; Option of On-Site Radiology and On-Site Laboratory*

**40% Preleased!**

For more information and a personal tour, please call Dr. Robert Marine or Susan Best  
2525 Riva Road, Annapolis, Maryland 21401 (301) 269-7992 Balt./ (301) 858-5035 Wash.



### FURNISHED OFFICE

Available at Osler Medical Center, Towson. Six rooms, 800 sq ft. Call 252-2522.

### OWINGS MILLS OFFICE TO SHARE

Growing internal medicine practice wishes to sublease space in new office. New office to open July 1, 1991. Layout input still possible. Receptionist and medical assistance also possible. For information, call Scott Rifkin MD 356-6504 or write 2 Park Center Court, McDonough Crossroads, Owings Mills, MD 21117

### MEDICAL-SURGEON'S OFFICE TO SHARE

Pikesville: office with private consultation room to sublease, full- or part-time; x-ray and lab available. Parking lot; near Metro stop & public transportation. 301-484-8066 except Tuesday.

### OFFICE SPACE

Available for sublet in the Pikesville area. Morning and afternoon hours available. Please contact 484-5238.

### MEDICAL OFFICE SUITE FOR LEASE

Osler Medical Center, Towson; near St. Joseph Hospital, GBMC, and Sheppard Pratt Hospital. Info: R.R. Kent MD, 301-323-5831 or 301-461-9922.

### MEDICAL OFFICE

Suitable for 1 or 2 physicians: St Mary's County, a rapidly growing semirural area. Contact Leon Berube for details, 997 Old Route 5, Mechanicsville, MD 20659 (301-884-3113).

### OFFICE SPACE FOR RENT

1,050 sq ft new office next to St. Joseph Hospital. 301-337-6800.

### PROFESSIONAL RESUME SERVICES

Successfully serving physicians since 1976. All specialties. Effective! Confidential. We provide curriculum vitae preparation, cover letter development and career planning. Immediate service available. Call 1-800-933-7598 (24 hrs). Alan Kirschen, M.A.

### MMJ Classified Advertising

*Med Chi Members:*  
\$5 per line per insertion

*Physician Nonmembers:*  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment.

Send ad replies or new ad copy to: MMJ, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

### OFFICE SPACE FOR RENT/SALE

Frederick, MD. 1021 sq ft, one block from local hospital. Available July 1, 1991. Call Dr. Charles Wright, 301-698-3301. ■

## PHYSICIANS

Do something different  
two days a month

Receive a commission  
in the Army National Guard

*The Army National Guard has immediate openings for physicians which require participation of only 2 days a month plus a 15-day Annual Training Period (a total of 39 days per year).*

### YOU WILL BE ELIGIBLE

- A COMMISSION IN THE ARMY NATIONAL GUARD
- AN EXCELLENT PART-TIME INCOME
- PAID ATTENDANCE AT:
  - CONTINUING MEDICAL EDUCATION COURSES
  - AMA CONFERENCES
  - KPUP (Active duty assignment up to 30 days in Europe, Asia and South America)
  - TRAINING AT U.S. ARMY HOSPITALS
- POST EXCHANGE & COMMISSARY
- MILITARY AIR TRAVEL WITHIN THE 50 STATES

MARYLAND ARMY NATIONAL GUARD  
PHIL HOWARD  
(301) 653-4618

610 Reisterstown Road, Pikesville, MD 21208



## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Anne Salmon Barone, Ph.D., M.D.  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000

## FELLS POINT MEDICAL BUILDING

The FELLS POINT MEDICAL BUILDING will be a 40,000 foot multi-speciality medical building at the corners of Fleet and Central Streets. It is part of the Inner Harbor complex. Occupancy of the building will be late 1992. Leases are available.

Some board certified surgical sub-specialities as well as all medical specialties are needed. A walk-in clinic will be open 18 hours a day-seven days a week.

Serious inquiries only. Contact:

**Lewis B. Newberg, M.D.**  
(301) 988-9529  
FAX: (301) 461-3430

## FAMILY PRACTICE/ INTERNAL MEDICINE

### Montgomery County, Maryland

Grow with an established multispecialty group in lucrative thriving metro area. Develop own practice within group and enjoy unlimited income potential. Excellent benefits include paid malpractice. Multi-site positions available at Mt. Airy and Rockville. Reply in confidence to:

Cheryl A. Dolan, Administrator  
Montgomery Medical Group, P.A.  
15235 Shady Grove Road, Suite 103  
Rockville, MD 20850  
or call (301) 417-7270

## PHYSICIAN

General Internal Medicine — Greater Baltimore Medical Center's Community and Family Health Center — seeking a physician to work in Primary Care Center in East Baltimore. Some teaching responsibilities. Candidates must be board eligible in internal medicine and be licensed to practice medicine in Maryland. Competitive salary with comprehensive benefit package. Reply with C.V. to: Mr. Jones, V.P. Operations, Executive Offices.

### GREATER BALTIMORE MEDICAL CENTER

6701 N. CHARLES STREET  
BALTIMORE, MARYLAND 21204

# GBMC

GREATER BALTIMORE MEDICAL CENTER

Equal Opportunity Employer

## EMERGENCY PHYSICIANS

Well established, successful, independent fee-for-service group, based in a modern suburban community hospital, seeks career-oriented emergency physicians. Part-Time. Primary responsibility for patients on "fast track" and assist full-time physicians with more acute, complex patients as needed. Bonus incentives and flexible schedule. Close to Annapolis and ocean communities. Board prepared in EM or related field. Available immediately.

Please contact and send CV to:

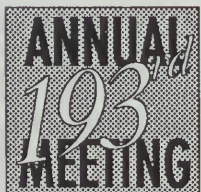
Walter L. Scheetz, MD, Director  
Emergency Medicine Department  
North Arundel Hospital  
301 Hospital Drive  
Glen Burnie, MD 21061  
(301) 787-4571/4572



---

# It's not whether you win or lose, it's where you play the game...

---



The Medical and Chirurgical  
Faculty of Maryland  
invites you to tee off with

---

*Fuzzy Zoeller,  
Nathaniel Crosby, and  
Skeeter Heath*

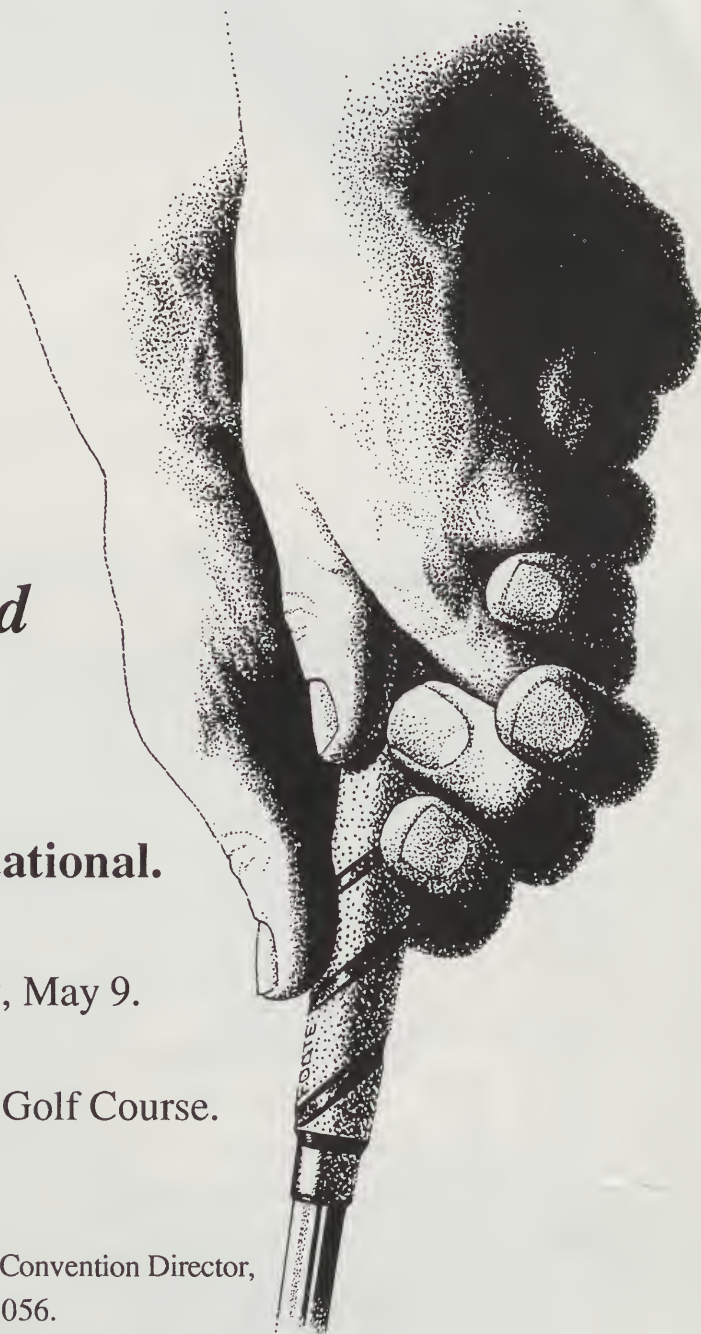
---

at the 1991 Med Chi golf invitational.

Come play with the pros on Thursday, May 9.  
Tee off starts 1 p.m. at the  
University of Maryland College Park Golf Course.

Proceeds to benefit breast cancer research.

For tickets and more information contact Med Chi's Convention Director,  
Michael Moran at 301-539-0872 or 1-800-492-1056.



Medical  
and Chirurgical Faculty  
of Maryland

# MALPRACTICE INSURANCE



## CHECK!

Whether you have

- ☐ the right policy
- ☐ the right premium
- ☐ the right coverage

You may have a great policy, but it doesn't mean that it will be the best and most fitting to your present & future needs.

*If you have not checked all the boxes above, call us today.*

## ONAL AND ASSOCIATES, INC.

*Complete Insurance Services*

For more information, contact  
Korky Onal

Telephone: (301) 859-1990 • FAX: (301) 684-3212



518 S. Camp Meade Road, Suite 4  
Linthicum, Maryland 21090



# A BRIGHT IDEA TO START WITH...



**180<sup>mg</sup>**  
**Calan<sup>®</sup> SR**  
(verapamil HCl) 180 mg  
SUSTAINED-RELEASE CAPLETS

*Address medical inquiries to:*  
G.D. Searle & Co.  
Medical & Scientific  
Information Department  
4901 Searle Parkway  
Skokie, IL 60077

**SEARLE**

G.D. Searle & Co.  
Box 5110, Chicago, IL 60680



# When you choose Princeton, you're in good company.

“One thing I really like is the approach Princeton takes toward defending claims. Princeton follows a policy of taking defensible cases to court, instead of settling just to avoid the hassle of dealing with a case. I think that's a wonderful way to handle frivolous claims.”

*Dr. Dwight Fortier  
Pediatrician, Annapolis*

More than 90% of Princeton-managed cases disposed of by the courts are resolved in the policyholder's favor.



Princeton Insurance Company  
4 North Park Drive  
Hunt Valley, MD 21030-1812  
301-785-0900

One thousand Maryland and Delaware doctors have chosen Princeton for their professional liability coverage. It's easy to make the switch.

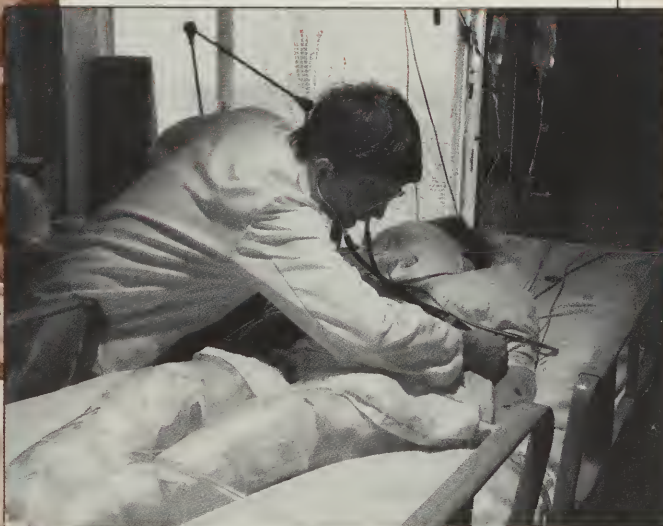
**Why wait?**



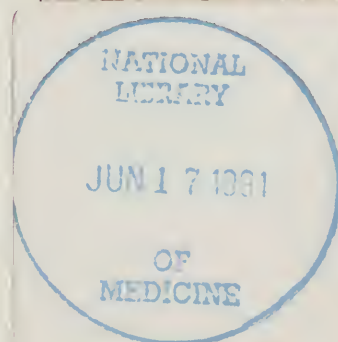
# MMJ

*Maryland Medical Journal*  
JUNE 1991

TIONAL LIBRARY OF MEDICINE  
D INDEX MEDICUS DIRECT  
00 ROCKVILLE PIKE  
THESDA MD 20894



Sinai Hospital  
of Baltimore:  
A Healthy  
Influence for  
125 Years



Endorsed by Med Chi  
for Maryland Physicians

©1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.

# 4,831 Of You Have Attended Our Risk Management Seminars.

## There's Always Room For One More.

Informed consent, ICD-9-CM coding, medical record documentation, physician-patient communication, AIDS and medical practice, emerging medical technologies, financial planning, legal aspects of medical practice, insurance options, office staff procedures, health care politics in the 90's, to mention a few.

We offer an ongoing schedule of timely, relevant, and concise Risk Management programs for you and your office staff, each specifically designed around the extra skills you need in today's practice of medicine. Developed by our member physicians, the programs feature expert speakers, convenient locations, and CME credits. Some even include premium discounts.

Our seminar evaluations tell us that we're doing things right, and our attendance figures speak for themselves. We'll look forward to seeing you at an upcoming program.

There's always room for one more!



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



In Bethesda And Potomac, Maryland

# One Choice Is Obvious

Anyone can build a large home in Potomac or Bethesda. But if you're willing to pay the price for luxury and convenience, you should also be getting a lot more for your money than just size and location. You should be getting a home that justifies its price down to every last detail. With noteworthy design.

Superior and innovative energy conservation techniques. Craftsmanship. And exceptional quality control.

Exactly the things our industry and peers have considered when, for over a decade, they've consistently honored Mitchell & Best with local, regional and national awards in all four categories.

And that's important to know. Because it means you'll always be able to choose the very finest home. A home that's more than just impressive to look at... a home that is a certified winner in every way. And not just because we say so.

## Grand Opening... EAGLE RIDGE

Our newest, largest luxury homes. In the woods... in Avenel.



STONEY CREEK KNOLL.....	840-8989	NORMANDY HILLS.....	983-8443
PLAYER'S TURNING AT AVENEL.....	365-1800	POTOMAC BEND.....	926-8891
PLAYER'S CROSSING AT AVENEL.....	299-8890	EAGLE RIDGE.....	365-6354
MAPLEWOOD PARK.....	530-8959	KENTLANDS.....	948-9156
PLAYER'S GATE.....	469-0392		

"We are pledged to the letter and spirit of U.S. policy for the achievement of Equal Housing Opportunity throughout the Nation. We encourage and support an affirmative advertising and marketing program in which there are no barriers to obtaining housing because of race, color, religion, sex, handicap, familial status, or national origin."



**C-I/Mitchell  
& Best Company**  
The homes of choice.





## **Princeton's Maryland Agents**

Affiliated Financial Services, Inc.  
Columbia, MD (301) 992-0043

Beall, Garner, Screen & Geare  
Cumberland, MD (301) 722-2500

Harry Cohen Insurance Agency, Inc.  
Baltimore, MD (301) 366-3030

Comprehensive Risk Management  
Timonium, MD (301) 560-2424

Consolidated Insurance  
Baltimore, MD (301) 944-9550

Contemporary Insurance Services  
Washington, D.C. (800) 658-8943  
(202) 887-5563

Corroon & Black, Stump, Harvey, Cook  
Hunt Valley, MD (301) 527-1200  
Bethesda, MD (301) 951-3300

Diversified Insurance Industries  
Baltimore, MD (301) 433-3000

William C. Garrett & Associates  
Towson, MD (800) 458-7295

Hardesty Insurance Services  
Dover, DE (302) 678-9555

The Harjes Agency  
Hunt Valley, MD (301) 785-6161

Ralph W. Lee & Company  
McLean, VA (703) 556-8787

MBS Insurance Services  
Mountain Lakes, NJ (201) 335-2900

Medical Liability Agency, Inc.  
Towson, MD (301) 296-8326

Medical Society of Delaware  
Insurance Services (MSDIS)  
Wilmington, DE (302) 571-0986

Med Net Financial  
Bethesda, MD (301) 961-8861

Onal's Insurance Agency  
Linthicum, MD (301) 859-1990

Reese, Yeatman & Associates, Inc.  
Bethesda, MD (301) 657-9490

Smith, Cropper & Deeley, Inc.  
Willards, MD (301) 835-2000

W.S. Borden Company  
Trenton, NJ (609) 394-5288

Widerman & Co.  
Cherry Hill, NJ (609) 428-0939

Wright-Gardner Insurance, Inc.  
Hagerstown, MD (301) 733-1234

# **Making the right choices means asking the right questions.**

You know the questions to ask your patients. Questions that will provide the information you need to make an informed decision about medical treatment.

When it comes to choosing a medical malpractice insurer, knowing which questions to ask--and how to interpret the answers--is no less important. Because just as your treatment decisions may have a lasting impact on your patient's long-term health, your choice of insurer may make all the difference to your professional and financial well-being in the years ahead.

In an uncertain medical situation, you might consult a specialist. When you're making decisions about insurance, why not consult with an insurance specialist? An expert who can suggest which

questions to ask, guide you through the technical jargon, and help you select the coverage that's right for you.

That's where Princeton's network of independent insurance agents comes in. Our agents understand the insurance needs of health care professionals. They'll show you how to compare costs and benefits, and help you avoid gaps or duplications in coverage.

Do ask an agent why Princeton should be your choice. Ask about our financial strength, about our claims management philosophy that vigorously defends physicians against meritless claims...and about our new office package policy that offers protection for your practice and premises. We think you'll like the answers.



**Princeton Insurance Company**  
4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900



# MMJ

## Maryland Medical Journal

JUNE 1991

VOLUME 40 NO 6

### ARTICLES

- Sinai Hospital of Baltimore: A Healthy Influence for 125 Years** . . . . . 451  
*Jerome P. Reichmister MD*
- Stroke in the Young (Part 1)** . . . . . 453  
*Barney J. Stern MD, Steven Kittner MD, MPH, Michael Sloan MD, Constance Meyd MD, David Buchholz MD, Daniele Rigamonti MD, Robert Woody MD, John Meyerhoff MD, William Bell MD and Thomas Price MD*  
Some of the more common disorders leading to stroke in the young, a relatively rare but serious problem, include cerebrovascular diseases, sources of emboli from the heart, migraine, drug use and abuse, and hematologic conditions.
- The Automatic Implantable Cardioverter-Defibrillator: Update 1990** . . . . . 463  
*Enrico P. Veltri MD, Diana Aarons RN and Juan Juanteguy MD*  
The automatic implantable cardioverter-defibrillator (AICD) has become the landmark breakthrough in therapy for patients at high risk for sudden cardiac death.
- Calcitonin and the Treatment of Osteoporosis** . . . . . 469  
*Christine R. Schneyer MD*  
Calcitonin, a potent inhibitor of bone resorption, is an important agent for the treatment of osteoporosis. An analgesic effect of salmon calcitonin has also been reported. The recent development of calcitonin nasal spray should eliminate the need for injections.
- The Efficacy of Amiodarone in the Treatment of Refractory Nonsustained Ventricular Tachycardia** . . . . . 475  
*Steven L. Ballas MD and Enrico P. Veltri MD*  
Amiodarone is very effective in suppressing refractory nonsustained ventricular tachycardia. Efficacy can be assessed after one week of therapy with continued long-term response in the vast majority of patients.
- Augmentation Rhinoplasty Utilizing Cranial Bone Grafts** . . . . . 479  
*Ira D. Papel MD*  
The cranial bone graft has proven to be a safe and effective augmentation procedure for use in reconstructive rhinoplasty.
- Thrombolytic Therapy for Acute Myocardial Infarction in the 1990s** . . . . . 485  
*Mark B. Effron MD and Ralph E. Morales MD*  
The efficacy of intravenous thrombolytic agents in preserving left ventricular function and in decreasing mortality from an acute myocardial infarction was demonstrated in the 1980s. The 1990s will concentrate on adjunctive therapy to thrombolysis in the treatment of an acute myocardial infarction.
- Glaucoma Treatment and the Laser Revolution** . . . . . 493  
*Irvin P. Pollack MD*  
The potential uses of laser energy are only beginning to be explored, but it is only a matter of time before we will be able to predictably alter the internal structures of the eye to better control any type of glaucoma.

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

### Advisory Member

Carmine M. Valente PhD

### Art Director

Virginia Carter

### Graphic Artist

Valentia McVey

### Communications Assistant

Lori Robinson

### Executive Director

Angelo J. Troisi FACHE

Communications Director

Michelle Burke MHSA

Maryland Advertising  
Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

Copyright © 1991. MMJ Vol 40, No 6. The *Maryland Medical Journal* USPS 332080. ISSN 0025-4363 is published monthly by the Medical and Chirurgical Faculty of Maryland and is a membership benefit. Subscription rates: U.S. and U.S. possessions, one year: nonmembers \$35; foreign \$42. Single copy: members \$5; nonmembers \$7. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: send address changes to *Maryland Medical Journal*, 1211 Cathedral St., Baltimore, MD 21201-5585. FAX 301-547-0915.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

## The Neurosurgical Treatment of Intracranial Aneurysms in the Community Hospital . . . . . 497

Ronald J. Cohen MD, FACS

A consecutive series of operations for thirty intracranial aneurysms in twenty-eight patients illustrates that patients with ruptured intracranial aneurysms can undergo surgery safely in an appropriately equipped community hospital.

## Stress Testing: Optimal Use of the Various Modalities of Stress Testing in the Diagnosis of Coronary Artery Disease . . . . . 501

Romulo F. Baltazar MD, FACP, FACC

Stress testing is useful in the diagnosis of coronary artery disease and in quantitating levels of fitness, evaluating rehabilitation progress, screening exercise-related arrhythmias, and evaluating medication efficacy.

## Drug Interference on Alpha-fetoprotein Assays . . . . . 513

Phillip J. Goldstein MD, Shan G. Sundaram PhD and

Saravanan Manimekalai PhD

Due to the *in vitro* effects of drugs on human alpha-fetoprotein (AFP) assays, clinicians should review a patient's medication history before interpreting a low maternal serum AFP and proceeding with more tests.

## Mexiletine-associated Left Ventricular Dysfunction: A Case Study . . . . . 519

Steven L. Ballas MD, Kenneth L. Baughman MD,

Lawrence S.C. Griffith MD and Enrico P. Veltri MD

Mexiletine is a lidocaine analogue used in the treatment of symptomatic ventricular arrhythmias. However, in selected individuals with baseline diminished left ventricular function, it may possess clinically significant negative inotropic effects.

## Proarrhythmia: Disparity of Programmed Electrical Stimulation Results and Spontaneous Occurrence: A Case Report . . . . . 521

Angel E. Alicea MD, Enrico P. Veltri MD and Diana Aarons RN

The disparity noted between programmed ventricular stimulation results and spontaneous occurrence of proarrhythmia suggests that programmed ventricular stimulation may be insensitive in identifying the risk and underlying mechanism of proarrhythmia.

## DEPARTMENTS

Epidemiology and Disease Control Program . . . . .	433
Executive Director's Newsletter . . . . .	441
A Clinical Moment with . . . Diabetes . . . . .	438
Maryland Oncology Newsletter . . . . .	525

## MISCELLANY

Physician's Recognition Award . . . . .	438
Doctors Note . . . . .	528
Information for Authors . . . . .	529
Classified Ads . . . . .	532

Cover photos courtesy of Sinai Hospital of Baltimore;  
cover design by Virginia Carter.



# Central Laboratories

Established 1970

*Partners for Quality Healthcare*

## **First in Communication:**

Central Laboratories of Associated Maryland Pathologists, Ltd. was the first clinical reference laboratory in the region to provide telecommunication of results to clients. We now provide real time result communication to our clients—when an assay has been verified and results released, you will receive the report on your teleprinter. Patient data is maintained for up to 6 months on-line for ease of retrieval.

## **First in Service:**

Central Laboratories, a privately owned regional reference laboratory, was first in the Baltimore-Washington area to provide 24-hour, 7 day comprehensive testing services, and maintains that distinction today.

## **Continuous in Quality:**

Quality assurance begins the minute the specimen is collected and continues throughout testing and reporting. Central Laboratories offers a comprehensive and growing list of assays.

**Phone the marketing department for information on our services. We will be pleased to provide a customized proposal for your laboratory testing needs.**



1920 Greenspring Drive  
Timonium, Maryland 21093

(301) 252-6710 • 1-800-331-2558 • fax (301) 252-6750

# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



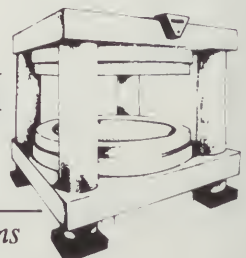
Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS<sup>™</sup> MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



ACCESSIBLE MRI of  
BALTIMORE COUNTY, INC.

110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



# *Catastrophic Illness is Rare and the Treatment is Critical.*

You know the patient. The one with chronic psychosis that hasn't responded to general inpatient care. The patient has comprehensive coverage so you've been able to admit him time and time again for inpatient care. But there's been little if any improvement, and you're frustrated. It's time to refer him to a hospital that is committed to treating the long term refractory patient and has the resources to do it. Sheppard Pratt.

Today's literature discourages long term hospitalization, and we agree. That same literature does, however acknowledge that a small group of chronic patients cannot be treated any other way. In 1984, Sheppard Pratt opened an 18 bed unit that treats only those types of patients.

We are not talking about custodial care nor do we treat patients who spend years talking about delusions. We provide long term, active, behavioral, psychopharmacological treatment for those patients who can genuinely be helped.

In addition to managing systematic and aggressive medication trials, our patients live within an established token economy. Patient education and social skills programming, and specialized activity therapy are provided daily throughout treatment. Formalized psychoeducation is also a vital component of treatment and family involvement. Comprehensive discharge planning is given attention equal to inpatient care. Sheppard Pratt provides many options for aftercare including a quarterway house, supervised housing, vocational training, outpatient therapy and medications management, and day hospitals.

Sheppard Pratt is a comprehensive network of psychiatric services. In addition to our 322 bed hospital we maintain the 16 bed Mt. Airy House, numerous community outreach programs and the National Center for Human Development. For more than 100 years, Sheppard Pratt has earned its reputation for providing quality care to the chronically ill patient. And during these difficult economic times, we remain loyal to that heritage.

For further information or to make a referral contact the Adult Admissions Office at:  
(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ *Sheppard Pratt*  
A not-for-profit health system

# Commitment and Service Since 1975

The *Med Chi Agency* was established by the Medical and Chirurgical Faculty in 1975 and now has over 5,000 physicians and employees as clients.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial products. You will benefit from the many coverages available for both your professional and personal needs. You will also benefit indirectly, because Med Chi owns the *Med Chi Agency* and the earnings from its operations.

For complete information about any insurance product or service, just give us a call. We can provide the answers you seek and the solutions you need.



## **THE MED CHI AGENCY**

1204 Maryland Avenue  
Baltimore, MD 21201  
301-539-6642 Toll Free-1-800-543-1262  
FAX-1-301-752-5421





## EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

June 1991

### **Haemophilus influenzae, type b (Hib) Conjugate Vaccines for Prevention of Hib Disease Among Infants and Children Two Months of Age and Older**

*Within the past six months, two conjugate vaccines (Lederle-Praxis and Merck Sharp and Dohme) have been licensed for use in infants. One additional conjugate vaccine (Connaught Laboratories) is available, but is only licensed for use in children 15 months of age or older. The following recommendations from the Immunization Practices Advisory Committee (ACIP) are taken from the Morbidity and Mortality Weekly Report, Recommendations and Reports. 1991; 40, No. RR-1:1-7.*

#### **Recommendations for Hib Vaccine Use**

**1. On the basis of the above considerations, the ACIP recommends that all children receive one of the conjugate vaccines licensed for infant use (HbOC or PRP-OMP)<sup>1</sup>, beginning routinely at 2 months of age (Table 1).**

Administration of the vaccine series may be initiated as early as age 6 weeks.

**2. If HbOC is to be used, previously unvaccinated infants 2-6 months of age should receive three doses given at least 2 months apart.** Unvaccinated infants 7-11 months of age should receive two doses of HbOC, given at least 2 months apart, before they are 15 months old (Table 2). Unvaccinated children 12-14 months of age should receive a single dose of vaccine before they are 15 months of age. An additional dose of HbOC should be given to all children at 15 months of age, or as soon as possible thereafter, at an interval not less than 2 months after the previous

dose. The other two conjugate vaccines licensed for use at 15 months of age may be used for this dose, but there are no data demonstrating that a booster response will occur. An interval as short as 1 month between doses is acceptable but not optimal.

**3. If PRP-OMP is to be used, previously unvaccinated infants 2-6 months of age should receive two doses 2 months apart and a booster dose at 12 months of age.** Children 7-11 months of age not previously vaccinated should receive two doses 2 months apart and a booster dose at 15 months of age (or as soon as possible thereafter), not less than 2 months after the previous dose. Children 12-14 months of age not previously vaccinated should receive a single dose and a booster dose at 15 months of age (or as soon as possible thereafter), not less than 2 months after the previous dose. The other two conjugate vaccines licensed for use at 15 months of age may be used for this dose, but there are no data demonstrating that a booster response will occur. An interval as short as 1 month between doses is acceptable but not optimal.

**4. Unvaccinated children 15-59 months of age may be given any one of the three conjugate vaccines licensed for this age group.**

**5. Ideally, the same conjugate vaccine should be used throughout the entire vaccination series (according to the schedule outlined in Table 1).** No data exist regarding the interchangeability of different conjugate vaccines with respect to safety, im-

<sup>1</sup> *Haemophilus b Conjugate Vaccine (Diphtheria CRM 197 Protein Conjugate) (HbOC), manufactured by Praxis Biologics, Inc., and Haemophilus b Conjugate Vaccine (Meningococcal Protein Conjugate) (PRP-OMP), manufactured by Merck Sharp and Dohme, newly licensed for use with infants.*

munogenicity, or efficacy. However, situations will arise in which the vaccine provider does not know which type of Hib conjugate vaccine the child to be vaccinated had previously received. Under these circumstances, it is prudent for vaccine providers to ensure that at a minimum an infant 2-6 months of age receives a primary series of three doses of conjugate vaccine. These recommendations may change as data become available regarding the response to different conjugate vaccines in a primary series.

**6. Children <24 months of age who have had invasive Hib disease should still receive vaccine, since many children of that age fail to develop adequate immunity following natural disease.** The vaccine series can be initiated (or continued) at the time of hospital discharge.

**7. Chemoprophylaxis of household or day-care classroom contacts of children with Hib disease should be directed at both vaccinated and unvaccinated contacts because immune individuals may asymptotically carry and transmit the organism.** Because of the time required to generate an immunologic response, vaccination following exposure should not be used to prevent secondary cases. However, the ACIP strongly supports extensive use of the Hib vaccine for infants attending day-care facilities; that action

should substantially decrease the occurrence of primary cases of Hib disease in day-care facilities. If every child in a household or day-care classroom has been fully vaccinated, chemoprophylaxis is unnecessary.

**8. Conjugate vaccine may be given simultaneously with diphtheria and tetanus toxoids and pertussis vaccine adsorbed (DTP); combined measles, mumps, rubella vaccine (MMR); oral poliovirus vaccine (OPV); inactivated poliovirus vaccine (IPV).** Any of the vaccines may be injected in the thigh, and two injections may be given in the same deltoid. All licensed conjugate vaccines should be administered by the intramuscular route. There are no known contraindications to simultaneous administration of any Hib conjugate vaccine with either pneumococcal or meningococcal vaccine.

**9.** No efficacy data are available on which to base a recommendation concerning use of the vaccine for older children and adults with the chronic conditions associated with an increased risk of Hib disease. Studies suggest, however, good immunogenicity in patients with sickle cell disease, leukemia patients who have had splenectomies or who have HIV infection, and administering vaccine to these patients is not contraindicated.

**See next two pages for Hib consent form<sup>2</sup>.**

**TABLE 1. ACIP-recommended *Haemophilus influenzae* type b (Hib) routine vaccination schedule**

Vaccine	2 months	4 months	6 months	12 months	15 months
HbOC	dose 1	dose 2	dose 3		booster
PRP-OMP	dose 1	dose 2		booster	

**TABLE 2. Detailed vaccination schedule for *Haemophilus b* conjugate vaccines**

Vaccine	Age at 1st dose (months)	Primary series	Booster
HbOC (Lederle-Praxis)	2-6	3 doses, 2 mo. apart	15 mo.*
	7-11	2 doses, 2 mo. apart	15 mo.*
	12-14	1 dose	15 mo.*
	15-59	1 dose	—
PRP-OMP (Merck Sharp and Dohme)	2-6	2 doses, 2 mo. apart	12 mo.*
	7-11	2 doses, 2 mo. apart	15 mo.*
	12-14	1 dose	15 mo.*
	15-59	1 dose	—
PRP-D (Connaught)	15-59	1 dose	—

\*At least 2 months after previous dose.

<sup>2</sup> **Important information about Hib disease** (see next two pages) is the "official" Centers for Disease Control statement and consent form for Hib vaccine use. Please reproduce for your office use or contact the Immunization Division, DHMH, for an additional copy for reproduction (301) 225-6679.



# **IMPORTANT INFORMATION ABOUT HAEMOPHILUS INFLUENZAE TYPE b DISEASE AND HAEMOPHILUS b CONJUGATE VACCINE**

***Please read this carefully***

**HAEMOPHILUS b  
Conjugate 10/19/90**

## **WHAT IS HAEMOPHILUS INFLUENZAE TYPE b DISEASE?**

*Haemophilus influenzae* type b (*Haemophilus b*) is a bacterium which can cause serious disease, especially in children under 5 years of age. This bacterium is not the cause of the "flu" (influenza). In the United States, *Haemophilus b* causes about 12,000 cases of meningitis (infection of the covering of the brain) each year, mostly in children under 5 years of age. About 1 child in every 20 with meningitis caused by *Haemophilus b* dies of it and about 1 out of 4 has permanent brain damage. *Haemophilus b* can also cause pneumonia and infections of other body systems such as blood, joints, bone, soft tissue under the skin, throat, and the covering of the heart.

About 1 in every 200 children in the United States will have a moderate to severe disease caused by *Haemophilus b* before their fifth birthday. Serious *Haemophilus b* disease is most common in children between 6 months and 1 year of age.

About half of all *Haemophilus b* disease in children happens during the first year of life. The disease still occurs with some frequency in older preschool children. Thirty percent of severe disease occurs in children 18 months of age or older.

## **HAEMOPHILUS b CONJUGATE VACCINE:**

There are at least three types of licensed *Haemophilus b* conjugate vaccines available for use. All of the vaccines contain the outer coating of the *Haemophilus b* bacterium which is the part that gives protection against the disease. All of the vaccines are approved for use in children 15 months of age and older.

There are some differences among the vaccines. However, all of the vaccines are considered to be effective. Not all of the vaccines are approved for use in infants. The *Haemophilus b* conjugate vaccine is given by injection. More than 90 percent of infants respond to 3 doses of the vaccine approved for infants by making substances in their blood (antibodies) that provide long-term protection against the severe diseases caused by *Haemophilus b* bacteria. However, several days are required for any protection to be obtained after immunization. Whether the vaccine provides protection against ear infections caused by *Haemophilus b* bacteria is not known. It does not protect against disease caused by other types of *Haemophilus*. The vaccine does not protect against meningitis caused by other bacteria. The vaccine is not known to cause *Haemophilus* disease. The *Haemophilus b* conjugate vaccine first became available in 1988 and its use for infants first became recommended in 1990.

***(PLEASE READ OTHER SIDE)***

## WHO SHOULD RECEIVE THE HAEMOPHILUS b CONJUGATE VACCINE?

1. All children should receive the vaccine approved for infants at 2, 4, and 6 months of age. Also, a dose of any of the approved Haemophilus b conjugate vaccines should be given at 15 months of age, or as soon as possible thereafter.
2. Unvaccinated children 15-59 months of age should receive a single dose of conjugate vaccine.
3. Children 60 months of age and older and adults normally do not need to be immunized.

## POSSIBLE SIDE EFFECTS FROM THE VACCINE:

The Haemophilus b conjugate vaccine has few side effects. Information about the vaccine now available in the United States indicates that about 2 out of every 100 infants who receive the vaccine may have a fever higher than 101°F; 2 out of every 100 may have redness in the area where the vaccine was given; and 1 out of every 100 may have swelling or warmth in the area where the vaccine was given. These reactions begin within 24 hours after the shot is given, but generally go away by 48 hours after immunization. As with any vaccine or drug, there is a rare possibility that other serious problems or even death could occur after receiving the Haemophilus b conjugate vaccine.

## WARNING - SOME PERSONS SHOULD NOT TAKE THIS VACCINE WITHOUT CHECKING WITH A DOCTOR:

- Anyone who is sick right now with something more serious than a minor illness such as a common cold.
- Anyone who has had a serious reaction to a product containing thimerosal, a mercurial antiseptic included in one of the vaccines that is in use.
- Anyone who has had an allergic reaction to a vaccine containing diphtheria toxoid so serious that it required medical treatment.

## QUESTIONS

If you have any questions about Haemophilus b disease or Haemophilus b conjugate vaccine, please ask now or call your doctor or health department before you sign this form.

## WHAT TO LOOK FOR AND DO AFTER THE VACCINATION:

As with any serious medical problem, if the person has a serious or unusual problem after getting the vaccine, call a doctor or get the person to a doctor promptly.

If the person who received the conjugate vaccine gets sick and visits a doctor, hospital, or clinic during the 4 weeks after immunization, please report it to:

## PLEASE KEEP THIS PART OF THE INFORMATION SHEET FOR YOUR RECORDS

*I have read or have had explained to me the information on this form about Haemophilus b conjugate vaccine. I have had a chance to ask questions which were answered to my satisfaction. I believe I understand the benefits and risks of the Haemophilus b conjugate vaccine and request that it be given to me or to the person named below for whom I am authorized to make this request.*

**Haemophilus b  
Conjugate 10/19/90**

INFORMATION ABOUT PERSON TO RECEIVE VACCINE (Please Print)				FOR CLINIC USE	
Name: Last		First	MI	Birthdate:	Age:
Address: Street				County:	
City		State		Zip	
Signature of person to receive vaccine or person authorized to make the request:					
X				Date:	
				Clinic Identification:	
				Date Vaccinated:	
				Manuf. and Lot No.:	
				Site of Injection:	

FOR DATA PROCESSING USE ONLY (OPTIONAL)

VACCINE HISTORY				Place check in box if history previously submitted							
DTP:				HAEMOPHILUS bCV:				MUMPS:			
m d yr m d yr m d yr m d yr m d yr				m d yr m d yr m d yr m d yr				m d yr m d yr			
POLIO:				MEASLES:				RUBELLA:			
m d yr m d yr m d yr m d yr m d yr				m d yr m d yr				m d yr m d yr			



# A BRIGHT IDEA TO START WITH...



**180<sup>mg</sup>**  
**Calan<sup>®</sup> SR**  
(verapamil HCl) 180 mg  
SUSTAINED-RELEASE CAPLETS

*Address medical inquiries to:*  
G.D. Searle & Co.  
Medical & Scientific  
Information Department  
4901 Searle Parkway  
Skokie, IL 60077

## A Clinical Moment With . . . Diabetes

### Hypoglycemia May Be a Prodrome of Diabetes Mellitus

*Doctor: Because I have two sisters with diabetes mellitus, I have been participating in an annual diabetes screening program. Last year I was told that I had hypoglycemia and this year that I have diabetes. Admittedly, I am about thirty pounds overweight, but I feel fine except for an occasional episode of weakness, tremor, hunger, and sweating. Is such a change possible?*

The symptoms described have been reported by some patients for a year or more before diabetes mellitus is confirmed by glucose-tolerance testing. Hypoglycemia, although technically confirmed when the plasma glucose is 59 mg/dl or less, does not produce symptoms until it is in the range of 40 to 49 mg/dl or less. Symptoms occur three to five hours after a meal, are usually mild to moderate in severity, and disappear without treatment. In the absence of disease, there is usually a rebound to euglycemia within fifteen to thirty minutes.

To confirm a diagnosis of postprandial hypoglycemia, the patient should be properly prepared and a five-hour glucose-tolerance test carried out with hourly or half-hourly testing, plus statim testing when

symptoms occur. Unless one suspects organic or iatrogenic hypoglycemia, C-peptide and serum insulin studies are an unnecessary expense.

Hypoglycemia has been described by O.P. Allen MD as part of the "Prodromal Stage" preceding the onset of diabetes mellitus. The modus operandi of this type of hypoglycemia is unknown. It may be that an early defect in diabetes mellitus consists of a diminution in the speed of mobilization of insulin in response to the stimulus of a rising blood glucose level; the capacity to produce insulin remains almost normal and the initial hyperglycemia resulting from the lag in insulin secretion finally causes a supernormal stimulus to the islets of Langerhans. The latter then discharge an amount of insulin sufficient to produce a transient hypoglycemia. As damage to the secretory capacity of the islets progresses, the hypoglycemic element of early diabetes disappears.

All patients with postprandial hypoglycemic symptoms and a family history of diabetes mellitus should be followed regularly for the possible development of the disease.

DeWITTE, DeLAWTER MD  
Editor



## PHYSICIAN'S RECOGNITION AWARD

### Recipients

During March 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Antoine, John Eugene  
Evans, James Lawrence  
Howie, Donald Laverne  
Kao, Tzu-Min  
Kaplan, Gerson Nathaniel  
Klatsky, Stanley Albert  
Koury, Thomas L.

La Kier, Philip Allan  
Larson, David Bruce  
Muawwad, Rafik David  
Papa, John Arthur  
Pooya, Manoochehr  
Robinson, Walker Lee  
Sharma, Sheo Pratap

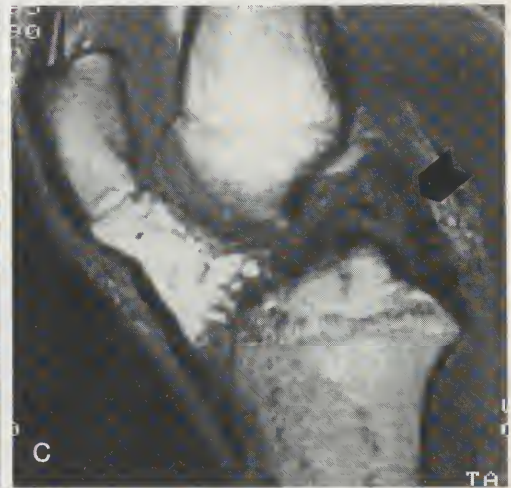
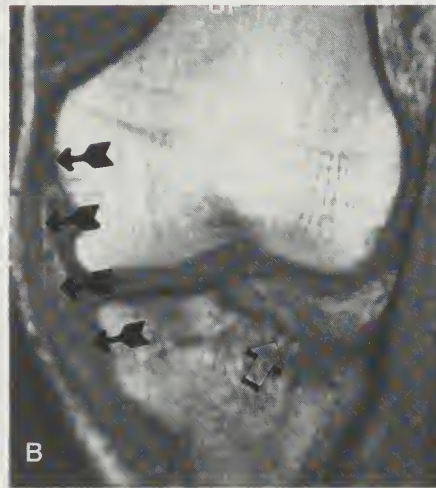
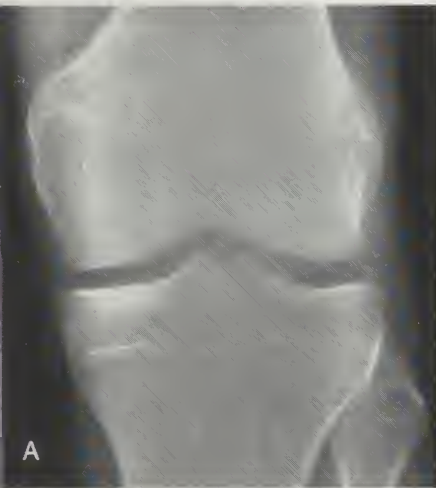


# Our Pictures Are Worth A Thousand Words.™

## Case #15

A 41 year old male suffered a hyper-extension injury to his left knee playing softball.  
**DIAGNOSIS: Medial collateral ligament tear. Bone bruise and fracture of the lateral tibial plateau. Posterior cruciate ligament tear.**

The plain X-ray (A) was interpreted as normal. A coronal MRI image (B) reveals a tear of the medial collateral ligament (arrows) and extensive proximal tibial bone bruise (marrow edema and hemorrhage) with a linear fracture (open arrow). A sagittal MRI image (C) demonstrates a posterior cruciate ligament tear (arrowhead). Plain radiographs are insensitive to soft tissue injury and even significant bone trauma may remain radiographically occult. The recognition of bone bruises is clinically vital as without proper treatment, osseous healing may become impaired. MRI provides an extremely comprehensive evaluation of both intra- and extra-articular pathology in the acutely injured knee and accurately assesses osseous, ligamentous, and cartilaginous integrity.



At Drs. Copeland, Hyman & Shackman, P.A. we are proud of our high resolution, state-of-the-art imaging. We look forward to consulting with you on any diagnostic imaging procedure in order to best serve you and your patients in the most expeditious and economic manner.



We provide convenient evening and week-end hours at both MRI locations, double-readings for quality assurance, and FAX capabilities for delivering reports immediately.

**You work hard to gain your patients' trust and confidence. At Drs. Copeland, Hyman & Shackman, we'll help you keep it.**

## Drs. Copeland, Hyman & Shackman P.A.

MRI Examinations available at:

Pomona Square Suite 119  
1700 Reisterstown Rd.  
(301) 486-8830

White Square Imaging Center  
9105 Franklin Square Drive  
(301) 574-8880

Harford Imaging Center  
104 Plumtree Rd./Bel Air  
Opening Summer 1991

**Drs. Copeland, Hyman & Shackman are pleased to announce the opening of the Harford Imaging Center in the summer of 1991, including MRI, CT, nuclear medicine, ultrasound, low-dose mammography and general x-ray services.**

# You Will Affect the Future of Medicine



## The Medical Manager® can affect the future of your practice.

The nation's #1 selling software (more than 10,000 systems installed nationwide) helps you in numerous ways.

- ◆ Filing claims electronically means you get payment faster.
- ◆ Increases staff efficiency.
- ◆ You have automated recall notices.
- ◆ Patient demographic data can help your practice grow.

The Medical Manager® is available for as little as \$250. per month on a lease/purchase option.

Call and we'll come to your office, review your needs, and prepare purchase and lease estimates with NO OBLIGATION. Once we install The Medical Manager®, we'll train your staff and provide *on-going support* when you need it.

**CALL TOLL FREE**  
**1 (800) 776-2454**



Baltimore, MD  
(301) 494-0992

Fairfax, VA  
(703) 359-0777

Richmond, VA  
(804) 330-9225

Winchester, VA  
(703) 662-4545

The Medical Manager® is marketed nationally by Systems Plus, Inc., a California corporation. Systems Plus, Inc., is a registered trademark of Systems Plus, Inc. The Medical Manager® is a registered trademark of Personalized Programming, Inc.



# Executive Director's Newsletter

June 1991

---

## J. David Nagel MD, New Med Chi President

---

On May 10, 1991, J. David Nagel MD became Med Chi's 131st President. During the Annual Meeting at the University of Maryland at College Park in May, Dr. Nagel assumed the Presidency for 1991-1992, stating that his goals for his term in office include initiating a plan to help Med Chi run even more efficiently and proposing a new leadership structure for Med Chi similar to that of the AMA Board of Trustees. He characterizes himself as a man not afraid to "ask the hard questions."

---

## Thank You! To "Doctor Of The Day" Volunteers

---

This year's "Doctor of the Day" program in Annapolis met again with huge success. Volunteer physicians covered a total of fifty-seven days during the session, assisted in a variety of ills, including a broken leg, upper respiratory infections and fainting episodes, and triaged seriously ill patients to area hospitals. Thanks to all the physicians who gave so generously of their time.

---

## Physician's Practice Digest Wins Award

---

Med Chi's newest membership publication, the *Physician's Practice Digest* magazine, has earned critical acclaim by winning a special award in the Sandoz Pharmaceuticals National Competition for Excellence in Medical Journalism. Presented to Reynaldo L. Lee-Llacer MD by a Sandoz representative at the Annual Meeting, the award consists of a plaque which is now on display at Med Chi. Members should look forward to receiving future issues of *PPD* on a quarterly basis. For more information on the publication, contact Michelle Burke, Director of Communications at 301-539-0872 or 1-800-492-1056.

---

## Proposed CLIA Enforcement Procedures

---

The April 2 *Federal Register* contained proposed rules for sanctions that the Health Care Financing Administration (HCFA) may impose on laboratories that are found not to meet federal requirements.

HCFA has proposed sanctions of graduated severity for three levels of noncompliance:

1. Condition level deficiencies with immediate jeopardy.
2. Condition level deficiencies without immediate jeopardy.
3. Deficiencies below the condition level without immediate jeopardy.

Penalties can range up to \$10,000 per day per violation.

The full text of these rules has been sent to component and specialty society presidents for dissemination to their members. The cutoff date for comments to HCFA is June 3, 1991, and can be sent to:

Health Care Financing Administration  
Department of Health and Human Services  
Attention: HSQ-179-P, P.O. Box 26676  
Baltimore, MD 21207

Please send copies of all comments to Med Chi, attention Rose Matriciani RN, JD, Assistant Executive Director for Health Care Policy. Med Chi's Public Health Committee and Ad Hoc Committee of Laboratory Regulations will review all comments.

---

## *Maryland Manufacturers' Drug Rebate Program for The Maryland Medical Assistance Program*

---

The Omnibus Budget Reconciliation Act (OBRA) of 1990 requires manufacturers to sign an agreement with the Health Care Financing Administration to provide rebates to the states' Medicaid Programs. Under this rebate program, states cannot receive federal financial participation for drug products of manufacturers who did not sign a rebate agreement by March 1, 1991. However, it is the understanding of the Department of Health and Mental Hygiene that HCFA will provide federal funds for the first quarter for the drug products of manufacturers who did not sign agreements.

Therefore, effective April 1, 1991, drug products from any manufacturers who did not sign the agreement are **not** covered by the Maryland Medical Assistance Program or the Maryland Pharmacy Assistance Program.

The full list of manufacturers who have signed to date has been sent to component society presidents for distribution to their members. For a copy of this list, contact your component president or call Leone Marks, Staff Specialist, Pharmacy Services, DHMH, 301-255-1459.

---

## *Maryland Access To Care Program Update*

---

Med Chi would like to extend its appreciation to every Maryland physician who agreed to participate in the Maryland Access to Care Program. The overwhelming response by Maryland physicians verifies and reinforces Medicine's commitment to providing primary health care to the State's neediest citizens.

While Med Chi is proud of the efforts of its membership to support and promote this program, there are still five areas in which additional physicians are needed. **These five areas are: CAROLINE, DORCHESTER, WICOMICO AND THE SOUTH WEST AREA OF PRINCE GEORGE'S COUNTY AND THE GAITHERSBURG AREA.** Med Chi is asking for your help in encouraging your colleagues to participate in the counties that have shortages. We need your help NOW! Anyone needing applications for the Maryland Access to Care Program can call Med Chi at 1-800-492-1056 or 539-0872. This is an opportunity and challenge to meet the demands of our profession by providing health services to Maryland citizens.

---

## *Health Personnel*

---

Nelson J. Sabatini, Acting Director, DHMH, has designated the Maryland Health Resources Planning Commission as the agency responsible for developing the Annual Health Occupations Shortage Projections Report. The Commission will work with other boards and commissions (including the Board of Physician Quality Assurance) to develop coordinated efforts for health personnel planning.

---

## *Rural Health Care Transition Grants Program*

---

Under the Health Care Financing Administration's 1991 Rural Health Care Grants Program, eligible rural, nonprofit hospitals may receive up to \$50,000 for three years to assist them in strengthening their capabilities to provide high quality care.

Five Maryland hospitals meet the criteria for these grants: Edward W. McCready Memorial Hospital, Kent and Queen Anne's Hospital, Inc., St. Mary's Hospital (Southern Maryland), Frostburg Community Hospital, and Garrett County Memorial Hospital.



---

## *Student Loans*

---

Medical students and residents are urged to write Maryland's members of Congress and encourage them to cosponsor and vote for H.R. 1482 (the Murphy bill) and S.102 (the Cohen bill) which would allow resident physicians to defer payment on Title IV student loans while completing accredited resident training programs.

Correspondence to Representatives and Senators may be sent to the following addresses:

United States House of Representatives  
Washington, D.C. 20515

United States Senate  
Washington, D.C. 20510

A key committee with regard to this legislation is the Committee on Labor and Human Resources. Maryland Senator Barbara A. Mikulski is a member of this Committee.

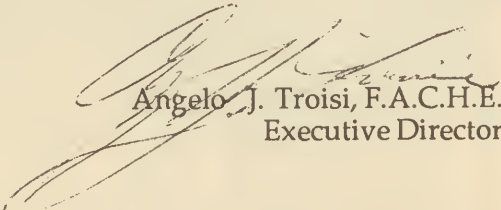
---

## *NIH Director*

---

Bernadine P. Healy MD, an Ohio cardiologist and Chief of the Cleveland Foundation's Research Institute, was confirmed by the Senate and will become the thirteenth Director of the National Institutes of Health.

Dr. Healy received her medical degree from Harvard Medical School and completed her residency in internal medicine, anatomic pathology and cardiovascular disease at The Johns Hopkins School of Medicine. She was also a Professor of Medicine at Johns Hopkins from 1976 to 1984 when she was named Deputy Director of the Office of Science and Technology Policy at the White House. Dr. Healy also served as President of the American Heart Association.



Angelo J. Troisi, F.A.C.H.E.  
Executive Director

# Meet at the Beach

## Med Chi's Semiannual Meeting

at the

Carousel Hotel and Resort

on the beach at

118th Street, Ocean City, Maryland 21842

Friday, Saturday & Sunday,  
September 13, 14, & 15, 1991

Special Guest Speaker:

*Antonio Novello, M.D.*

*U.S. Surgeon General*

Ocean Front View Guaranteed to all Pre-registrants





# Meet the new team in town.

Maryland General Hospital of Baltimore has teamed up with Bryn Mawr Rehab of Malvern, Pennsylvania, one of the premier physical medicine and rehabilitation facilities in the country to form *Maryland General-Bryn Mawr Rehab Center*.

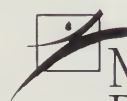
The new center, staffed by 50 of the finest rehab physicians, therapists, nurses and clinical specialists in the area, will offer the highest quality, comprehensive inpatient and outpatient rehabilitation services.

*Maryland General-Bryn Mawr Rehab Center* features 33 inpatient rehab beds with 15 devoted

to brain injured patients and 18 designated for orthopedic and neurological rehabilitation. Outpatient services are available at the Maryland General Campus in Baltimore and at our satellite health care centers in the neighboring communities of Catonsville and Timonium.

We invite you to meet the new team in town. Call Mary Filippelli, our Administrative Director at (301) 225-8380 to get all the details and to arrange for a tour of our new facility.

*Maryland General-Bryn Mawr Rehab Center.* When it comes to rehab care, we're strictly major league.



MARYLAND GENERAL  
BRYN MAWR REHAB CENTER

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380



For your insulin-mixing  
or NPH-using patients

## Humulin<sup>®</sup> 70/30 makes life easier

**Rapid onset and sustained  
duration insulin activity  
in a single vial**

- May offer enhanced control through a more physiologic activity profile
- Accurate dosing—eliminates mixing errors
- Convenient premixed dose for better compliance
- Easy to use—for patients who find mixing difficult



**Specify**  
**Humulin<sup>®</sup> 70/30**  
70% human insulin  
isophane suspension  
30% human insulin injection  
(recombinant DNA origin)

### Humulin has just the right mix

Any change of insulin should be made cautiously and only under medical supervision.

Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente<sup>®</sup>, etc), species (beef, pork, beef-pork, human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

*Leadership In Diabetes Care*



**Eli Lilly and Company**  
Indianapolis, Indiana  
46285



# Talk to us. (If you talk enough the dictation equipment is free!)

- Solves staffing, space and reliability problems.
- 3600 lines a day qualifies for free equipment.
- Fast turn-around, including 3-hour STAT service.
- Printout in your office, instant revisions.

If your practice generates 3600 lines a day or more, you qualify for a complete digital dictating system without charge. Favorable arrangements are also available with smaller volumes.

Then, transcriptions are as easy as picking up your phone and dictating directly to our high-security digital recording system. Expert medical transcriptionists enter your notes into our data banks for backup, return transmission and printout. At the same

time, you'll also be building a data base for easier conversion to electronic record keeping.

Transcriptions International's electronic system is today's answer for physicians, hospitals, clinics, HMOs, group practices, rehab centers, law firms or any business needing quick, accurate and economical transcriptions.

Call today for a no obligation proposal and talk to us about your dictation needs.

**For more details, call 1-(800)-348-4326.**

 **TRANSCRIPTIONS**  
INTERNATIONAL, INC.

703 Giddings Avenue, Annapolis, MD 21401. (301) 280-6205

# AM HIGH

## PUT YOUR MEDICAL CAREER IN FLIGHT.

Discover the thrill of flying, the end of office overhead and the enjoyment of a general practice as an Air Force flight surgeon. Talk to an Air Force medical program manager about the tremendous benefits of being an Air Force medical officer:

- Quality lifestyle, quality practice
- 30 days vacation with pay per year
- Support of skilled professionals
- Non-contributing retirement plan if qualified

Discover how to take flight as an Air Force flight surgeon. Talk to the Air Force medical team today. Call

**USAF HEALTH  
PROFESSIONS**

**(301) 981-7897  
COLLECT**





# We'd like you to review our entire medical history.



## Sinai Hospital presents *Caring is Timeless:* a celebration in photographs of our 125 years.

We're celebrating our 125th year of service to the Baltimore community with a very special exhibit June 15-16 at the Baltimore Museum of Art. Please join us as we retrace our heritage with images from our past. It's photographic proof that at Sinai, caring is timeless.



# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)



*Lumbar Spine*



---

# Sinai Hospital of Baltimore: A Healthy Influence for 125 Years

---

Jerome P. Reichmister MD

---

*Dr. Reichmister is the President of the Medical Staff of Sinai Hospital of Baltimore, Baltimore, MD.*

When the Hebrew Hospital and Asylum (later Sinai Hospital) was founded 125 years ago, its mission was to service the Jewish indigent and Jewish physicians who were denied access to training programs elsewhere. It served these purposes up through the first half of the twentieth century, and by the 1980s, Sinai Hospital had become a tertiary care hospital with research and training programs. The hospital now has regional programs in cardiology, oncology, women's health, trauma and rehabilitation medicine, and has developed innovative programs in emergency and ambulatory medicine, and in specialized pediatrics. We have responded to changing health care needs, and will continue to innovate and maintain our partnership with the entire community in providing care for the sick and helping to keep people well.

Sinai Hospital has the third largest residency training program in the State of Maryland and is a major teaching hospital affiliated with The Johns Hopkins and University of Maryland Schools of Medicine. Research at Sinai Hospital led to the first automatic implantable defibrillator, and Sinai Hospital physicians were first in Maryland to use the nephroscope to disintegrate kidney stones. In addition, the first *in vivo* implant of a shunt in a hydrocephalic twin was done by Sinai physicians.

Assuring the continuation of outstanding patient care, and supporting medical education programs and research are the foundation for Sinai Hospital's next 125 years. ■

# Congratulations Sinai Hospital for 125 years of service, celebrating challenges of the past... meeting needs of the future.

---

DRS.  
SCHULTZE,  
SNIDER  
&  
ASSOCIATES,  
P.A.

RADIOLOGISTS

The Sinai Hospital of Baltimore  
Department of Radiology 578-5325

**Owings Mills**  
Imaging Center at McDonogh  
Crossroads 363-6677

**Lutherville/Towson**  
296-6222

**Homewood**  
South Professional Building  
467-1905

**Owings Mills**  
Mammography and Ultrasound Center  
at McDonogh Crossroads 363-0767

**Lutherville/Timonium**  
Magnetic Resonance Imaging Center  
at the Old Lutherville/Timonium  
Post Office 561-4674

**The Union Memorial Hospital**  
Department of Radiology  
554-2585

*Opening Fall 1991:*  
**Greenspring/Pimlico**  
The Medical Office Building  
(at Sinai Hospital) 367-8588

**Greenspring/Pimlico**  
Professional Building and Imaging  
Center (at Children's Hospital)  
462-6700

**The Children's Hospital & Center**  
For Reconstructive Surgery  
Department of Radiology 462-6800



---

# Stroke in the Young. (Part I)

---

Barney J. Stern MD, Steven Kittner MD, MPH, Michael Sloan MD,  
Constance Meyd MD, David Buchholz MD, Daniele Rigamonti MD,  
Robert Woody MD, John Meyerhoff MD, William Bell MD  
and Thomas Price MD

---

---

*Some of the more common disorders leading to stroke in the young, a relatively rare but serious problem, include cerebrovascular diseases, sources of emboli from the heart, migraine, drug use and abuse, and hematologic conditions.*

---

*From Sinai Hospital of Baltimore where Dr. Stern is Director of the Division of Neurology; and from The Johns Hopkins Medical Institutions where Dr. Stern is Associate Professor of Neurology, Dr. Buchholz is Associate Professor of Neurology and Director of Ambulatory Services for Clinical Neurosciences, Dr. Meyd is Assistant Professor of Neurology, and Dr. Bell is Professor of Medicine and Radiology; and from the University of Maryland Medical Systems where Dr. Price is Professor of Neurology and Epidemiology and Preventive Medicine, and Director of Stroke Services, Dr. Sloan is Assistant Professor of Neurology and Director of the Neurovascular Laboratory and Neurological Critical Care Unit, Dr. Kittner is Assistant Professor of Neurology and Epidemiology and Preventive Medicine, and a member of the Stroke Center, Dr. Rigamonti is Assistant Professor in the Department of Neurosurgery, Dr. Meyerhoff is Assistant Professor of Medicine in the Division of Rheumatology and Clinical Immunology, and Dr. Woody is the former Director of Pediatric Neurology.*

*Dr. Kittner is supported in part by a Clinical Investigator Development Award (KO8-NS01319-01) from the National Institute of Neurological Disorders and Stroke, Bethesda, MD; by a Grant-in-Aid from the American Heart Association (AHA); and by funds contributed by the AHA Maryland Affiliate, Inc.*

*Reprints: Barney J. Stern MD, Division of Neurology, Sinai Hospital of Baltimore, Baltimore, MD 21215.*

The young patient with a stroke represents a relatively uncommon but serious problem. Accurate diagnosis and effective management are often a challenge. Since this illness strikes a person in the prime of life, the burden on society is not only that of medical evaluation and treatment, but also the costs of rehabilitation and lost productivity.

A basic tenet of stroke care is to define the underlying pathophysiology of the patient's problem; proper management decisions flow from this information. A fundamental challenge in approaching a young stroke patient is that the cause of the stroke can be one of many disease processes. Furthermore, the cause of a young patient's stroke is often a rare disease; the diagnosis may be missed if the patient is not approached in a comprehensive and systematic fashion.<sup>1,2</sup>

The clinician can be guided by several sources of information in approaching a stroke patient fifteen to forty-four years of age. The patient's personal and family history (Table 1), the bedside examination (Table 2), and carefully selected diagnostic studies can often provide clues to the stroke's etiology. In Part I of this series,

**Table 1. Patient's History**

Historical Fact	Significance	Historical Fact	Significance
Migraine	Predisposes to ischemic stroke, especially if complicated migraine	Bruisability	Coagulopathy, Ehlers-Danlos syndrome, Henoch-Schonlein purpura, cryoglobulinemia
Trauma	Carotid or vertebral artery dissection, even with mild trauma Delayed "spat" apoplexy causing a hemorrhagic stroke Fat emboli Arterial dissection	Sickle cell disease	Large and small vessel occlusive disease, Intracerebral, epidural, and subdural hematomas and subarachnoid hemorrhage
Chiropractic manipulation		Hemoglobin SC disease	Ischemic stroke
Intravenous drug abuse	Endocarditis, HIV infection, vasculitis, paradoxical emboli, vasospasm	Polycythemia	Arterial and venous thrombosis, Von Hippel-Lindau disease Venous thrombosis
Drug use/abuse		Paroxysmal nocturnal hemoglobinuria	
heroin	Endocarditis, foreign body emboli	Sneddon's disease	Lupus anticoagulant
cocaine	Hemorrhagic and ischemic infarct	Bone marrow transplantation	Nonbacterial thrombotic endocarditis, septic endocarditis, hemorrhagic events with thrombocytopenia
sympathomimetics	Hemorrhagic events, vasculitis		
phencyclidine	Hemorrhagic events	Raynaud's phenomenon	Scleroderma, systemic lupus erythematosus
birth control pill	Arterial and venous thrombosis, subarachnoid hemorrhage, paradoxical emboli	Behcet's disease	Lupus anticoagulant, venous thrombosis
L-asparaginase	Arterial and venous thrombosis, hemorrhagic events	Chronic ear and mastoid infection	Venous thrombosis
Alcohol	Hemorrhagic and ischemic events	Congenital heart disease	Paradoxical emboli, endocarditis
Cigarette smoking	Ischemic events	Systemic lupus erythematosus	Lupus anticoagulant, "small vessel disease," non-bacterial thrombotic endocarditis
Febrile infection, especially bacterial	Ischemic infarction		
Lyme disease		Inflammatory bowel disease	Arterial and venous thrombosis
Pregnancy/postpartum	Lupus anticoagulant, neuroborreliosis Ischemic and hemorrhagic events; consider timing of stroke relative to gestational stage	Nephrotic syndrome	Arterial and venous thrombosis
Fetal wastage	Lupus anticoagulant and anticardiolipin	Sarcoidosis	Vasculopathy
HIV infection/AIDS	Ischemic infarct associated with non-bacterial thrombotic endocarditis, syphilis, lupus anticoagulant, and HIV vasculitis; hemorrhagic events	Wegener's granulomatosis	Ischemic infarction
Deep venous thrombosis	Paradoxical embolus, lupus anticoagulant, hypercoagulable conditions	Lymphomatoid granulomatosis	Ischemic infarction
Systemic cancer	Nonbacterial thrombotic endocarditis Venous thrombosis Hemorrhage into metastasis, especially melanoma and germ cell tumors Hemorrhagic events: myelogenous and lymphoblastic leukemia, acute promyelocytic leukemia with DIC Tumor emboli	Pheochromocytoma	Von Hippel-Lindau disease, neurofibromatosis
Radiation therapy	Occlusive vascular disease	Family history	
Ischemic heart disease	Premature atherosclerosis	Hyperlipidemia, early onset MI/stroke	Ischemic infarction
Peripheral vascular disease	Premature atherosclerosis	Mitral valve prolapse	Cardiogenic embolus
Peripheral arthritis	Rheumatoid arthritis, systemic lupus erythematosus	Subarachnoid hemorrhage	Cerebral aneurysm
Renal cell carcinoma	Von Hippel-Lindau disease	Tuberous sclerosis	Cardiogenic embolus, arterial dysplasia
		Neurofibromatosis	Ischemic and hemorrhagic stroke, moya moya disease, aneurysm
		Von Hippel-Lindau disease	Hemorrhagic events, especially spinal source of SAH
		Osler-Weber-Rendu disease	Paradoxical emboli, hemorrhagic events
		Familial cavernous angiomas	Hemorrhagic events
		Mitochondrial encephalopathy, lactic acidosis, and stroke (MELAS)	Ischemic stroke
		Pseudoxanthoma elasticum	Hemorrhagic events
		Ehlers-Danlos syndrome	Cerebral aneurysm, ischemic infarction

we focus on some of the more common etiologic categories leading to stroke.

### Epidemiology

Adequate incidence data for stroke in young adults in the United States are lacking. Studies from other countries suggest an incidence of eleven to twenty-four per 100,000 persons fifteen to forty-four years of age.<sup>3</sup> Although the prevalence of cerebrovascular disease among persons eighteen to forty-four years of age is only 4 percent of the prevalence at ages sixty-five to seventy-four,<sup>4</sup> the economic importance of stroke in the young is disproportionately great. Available data

suggest that there is an excess stroke risk among black Americans, which is most evident in the younger age groups. Cerebrovascular disease is more than twice as prevalent as multiple sclerosis in the eighteen to forty-four age group.<sup>4</sup>

### Causes of Stroke in the Young

Stroke syndromes can be characterized as principally being caused by either ischemic or hemorrhagic processes. In the young, hemorrhagic disease is disproportionately represented in comparison to older age groups. For example, a survey of young stroke patients found a yearly incidence rate for ischemic



**Table 2. Physical Examination**

Finding	Significance	Finding	Significance
General appearance		Eye	
tall, thin body habitus	Marfan's syndrome (aortic dissection, mitral valve prolapse) Homocystinuria	lens subluxation	Marfan's syndrome, homocystinuria
Blood pressure		retinal phlebitis	Vasculitis, ischemic infarct
hypertension	Neurofibromatosis (pheochromocytoma, renal artery stenosis) Von Hippel-Lindau disease (pheochromocytoma)	retinal angioma	Familial cavernous angiomatosis, Von Hippel-Lindau disease
arm asymmetry	Coarctation of the aorta, aortic dissection, Takayasu's disease	visual loss, optic atrophy	Neurofibromatosis
diminished leg pressure	Aortic dissection, Takayasu's disease	retinal hamartoma	Tuberous sclerosis
Fever	Endocarditis	angioid streaks	Pseudoxanthoma elasticum
Skin		corneal arcus	Hypercholesterolemia
osler nodes, splinter hemorrhages	Endocarditis	corneal opacity	Fabry's disease
needle tracks	Intravenous drug abuse, HIV infection	Lisch nodules (pigmented hamartomas)	Neurofibromatosis
cafe-au-lait spots, axillary freckles, neurofibromas	Neurofibromatosis	Pharynx	
excessive laxity	Ehlers-Danlos syndrome (mitral valve prolapse, aneurysm)	orange tonsils	Tangier disease
telangiectasia	Hereditary hemorrhagic telangiectasia (Osler-Wever-Rendu disease), scleroderma	Heart	
purpura	Henoch-Schonlein purpura, cryoglobulinemia	murmur	Endocarditis, mitral valve prolapse, ventricular septal defect, asymmetric septal hypertrophy, myxoma, hamartoma (tuberous sclerosis)
vascular nevus	Familial cavernous angiomatosis, Bannayan-Zonana syndrome	click	Mitral valve prolapse
capillary angioma	Familial cavernous angiomatosis	Vessels	
aphthous ulcers	Behcet's disease	diminished pulses	Premature atherosclerosis, coarctation of the aorta, aortic dissection, Takayasu's disease
angiokeratosis	Fabry's disease	bruit	Premature atherosclerosis, fibromuscular dysplasia, arterial dissections, homocystinuria
livedo reticularis	Sneddon's disease (lupus anticoagulant), systemic lupus erythematosus	Abdomen	
facial angiofibromas, ash leaf spot, ungual fibroma, shagreen patch	Tuberous sclerosis lentiginosis	hepatosplenomegaly	Tangier disease
blue nevi	Cardiac myxoma	polycystic kidneys	Cerebral aneurysm
xanthoma	Hyperlipidemia	Extremities	
xanthlasma	Hyperlipidemia	xanthomas	Hypercholesterolemia, pseudoxanthoma elasticum
oral and genital ulcers	Behcet's syndrome	sclerodactyly	Scleroderma
papules, atrophic lesions	Degos disease (malignant atrophic papulosis)	venous thrombosis	Hypercoagulable state
Adenopathy	HIV infection, sarcoidosis, Tangier disease	Nervous system	
		mental retardation	Hereditary disease leading to cognitive impairment and stroke (tuberous sclerosis, homocystinuria)
		deficits in multiple vascular territories	Emboli, vasculitis
		muscular dystrophy	Mitral valve prolapse
		proximal muscle weakness	Polymyositis
		neuropathy	Tangier disease, Fabry disease

infarction to be approximately 3.4 per 100,000 and for hemorrhagic processes, 5.1 per 100,000.<sup>5</sup>

A classification of nontraumatic hemorrhagic processes causing stroke includes ruptured arteriovenous malformations (AVM) (29 percent), hypertension (15 percent), ruptured aneurysms (10 percent), miscellaneous conditions (22 percent), and undetermined causes (24 percent).<sup>6</sup>

Ischemic stroke syndromes can be attributed to large-vessel extracranial or intracranial disease (atherosclerosis and other vasculopathies), small-vessel intracranial disease, cardiogenic emboli, hematologic and other systemic diseases, and undetermined causes. Because of the variability in classification schemes, it is difficult to assign percentage values to these groups. However, roughly speaking, large and small vessel disease accounts for 31 to 54 percent of patients, cardiac disease 15 to 35 percent of patients, hematologic and other systemic diseases some 15 percent of patients, and undetermined causes 4 to 45 percent of patients.

The latter group deserves careful evaluation to try to decipher the underlying problem.

### Vasculopathies

*Atherosclerosis* occurs in young people, especially if there are predisposing factors such as hyperlipidemia, radiation therapy, and homocystinuria. Ischemic stroke results from hemodynamic compromise or distal embolization from an atherosclerotic plaque.

Blunt carotid artery injury can occur in conjunction with craniocervical trauma. The carotid artery injury is often overlooked because of other more pressing injuries, and the diagnosis of *dissection* is only considered after the onset of neurologic problems. A rent in the arterial wall allows blood to dissect through the vessel wall and cause a hematoma which narrows or occludes the true lumen, resulting in distal hypoperfusion. A luminal clot can also form and embolize distally.

Neck injuries can also cause stretching and distor-

tion of the vertebral arteries resulting in dissection.<sup>7</sup> There appears to be a propensity for adolescents to have vertebral artery dissection. Intense athletic activity during which the neck is hyperextended, such as weightlifting and swimming, can traumatize the vertebral artery.

Carotid and vertebral artery dissections can also occur spontaneously. Fibromuscular dysplasia (FMD) and disorders of collagen predispose to arterial dissections. The vessel often recanalizes and many patients have a good prognosis. A dissecting aneurysm can result from the arterial injury and require surgical repair.

*Fibromuscular dysplasia*, although usually an incidental angiographic finding, has been associated with artery-to-artery embolic stroke, intracranial aneurysm and carotid-cavernous sinus fistula. FMD can involve the extracranial carotid and vertebral arteries and, occasionally, intracranial large arteries.

*Moya moya disease* is a progressive intracranial arterial occlusive process leading to telangiectasias at the base of the brain. Angiography reveals a typical blush resembling puffs of smoke (*moya moya*). The *moya moya* appearance is now thought to be a non-specific radiographic pattern characteristic of an isolated idiopathic disorder (*moya moya disease*) or associated with other conditions such as neurofibromatosis, sickle cell disease, Marfan's syndrome, and Down's syndrome.

*Cerebrovascular malformations* are a particularly common cause of nontraumatic intracranial bleeding in the young.<sup>8</sup> Cavernous malformations are easy to diagnose with magnetic resonance imaging (MRI). The familial form of cavernous malformation is as frequent as the sporadic form and is characterized by the onset of symptoms in the first two decades of life. Though seizures are the most common presenting feature, bleeding occurs in about one fifth of patients.<sup>9</sup>

Spontaneous ruptured intracranial aneurysm should always be suspected as a cause of intracranial hemorrhage. Among almost 6,000 patients with ruptured intracranial aneurysm, 1 to 1.9 percent of the patients were age nineteen years or less.<sup>10</sup> Another series found that 95 of 476 (20 percent) patients with subarachnoid hemorrhage (SAH) were ages 15 to 45 years. Conditions associated with ruptured intracranial aneurysm in the young are coarctation of the aorta, polycystic kidney disease, AVM, and Marfan's, Ehlers-Danlos and *moya moya* syndromes.

### Lipoproteins and Stroke

Approximately 25 percent of all ischemic strokes in the young are ascribed to atherosclerosis with the proportion increasing with each decade. Plasma lipid abnormalities and aberrant cellular cholesterol metabolism are presumed to contribute to accelerated atherosclerosis. However, the relationship of lipoprotein abnormalities to the development of cerebral atherosclerosis and to subsequent thromboembolic

stroke remains to be determined. Lipid analysis in stroke cases has included measurement of total serum cholesterol, triglycerides, and high-density lipoprotein cholesterol (HDL-C) performed at various intervals after stroke. Recent developments in apolipoprotein fractionalization, understanding of lipoprotein receptors, and intracellular cholesterol metabolism suggest that plasma lipid levels do not tell the whole story.<sup>11</sup>

Although elevated total serum cholesterol and low-density lipoprotein cholesterol (LDL-C) have been established as risk factors for coronary artery disease, the relationship to stroke is less clear. The Framingham Study showed a negative association of LDL-C with stroke in women. Subsequent studies have suggested a protective effect of HDL-C, with low HDL-C predictive of increased risk for stroke.<sup>11</sup> In 1989, the multiple risk factor intervention trial (MRFIT) reported on fatal stroke risk in 350,977 men without a history of heart attack or diabetes.<sup>12</sup> Elevated total serum cholesterol correlated positively with death from intracranial hemorrhage. However, the pathogenesis of ischemic stroke related to elevated lipids is presumably atherosclerotic disease of the carotid or vertebral arteries. The MRFIT data would then suggest that previous studies which lumped ischemic stroke and intracranial hemorrhages may have been misleading.

With advances in neuroradiology, diagnostic precision has increased so that study populations may now be accurately defined. The distinction between ischemic and hemorrhagic stroke is now readily made and ischemic strokes can be classified as cortical or subcortical lesions. Although both cortical and subcortical strokes can be secondary to embolization from atherosclerotic large vessel disease, subcortical strokes are more likely to be related to intracranial, hypertensive, small-vessel disease which has not been associated with lipid abnormalities. Adams reported plasma lipoprotein analysis in forty-eight patients with cortical infarctions and thirty-six patients with subcortical infarctions.<sup>13</sup> The two groups did not differ with respect to total cholesterol, triglycerides, LDL-C, very low-density lipoprotein (VLDL), or apoprotein A1 and B. Concentrations of HDL-C were higher in patients with lacunar stroke than with cortical stroke, due primarily to low HDL-C in patients with cortical stroke. Thus, lipoprotein analysis in clearly defined stroke groups may reveal specific abnormalities amenable to preventive measures.

The timing of lipoprotein analysis in relation to the onset of stroke will influence the results. In the acute phase of stroke, serum cholesterol and triglyceride levels are depressed so that abnormalities may go undetected. Lipid abnormalities are most marked at three months after an acute stroke.<sup>14</sup> At the present time, it appears prudent to recommend fasting serum lipid studies (total cholesterol, triglycerides, and HDL-C) in young patients with stroke in whom the etiology is obscure. If the profile is normal, a repeat determination twelve weeks after the event should be obtained. Young stroke patients with hyperlipidemia should be



vigorously treated according to the American Heart Association guidelines.

It appears that in young patients, the interaction of lipid abnormalities and other risk factors for atherosclerosis may be particularly important. Although not systematically studied, the young stroke patient with atherothrombotic disease tends to fit a profile of heavy cigarette smoking, diabetes mellitus, or hypertension; attention should be paid to their management along with dietary or other intervention for lipid abnormalities.

### Cardiac and Transcardiac Causes of Cerebral Infarction

The proportion of ischemic strokes attributed to cardiac embolism has ranged from 24 to 29 percent in a recent referral center series<sup>15</sup> and from 28 percent to 31 percent in population-based studies.<sup>1</sup> There is reason to believe that these estimates are conservative since these studies were performed before the widespread use of newer cardiac diagnostic techniques.

The cornerstone of the diagnosis of a cardiac or transcardiac embolic stroke is the documentation of a potential source of embolism.<sup>16</sup> The presence of such a source, however, does not necessarily imply that the cardiac lesion is the cause of the stroke.

Cardiac evaluation should begin with two-dimensional transthoracic echocardiography. If this study is normal, a more sensitive method, transesophageal echocardiography, should be performed.<sup>17</sup> These tests may reveal a cardiac finding which is associated with emboli and which will become the focus of therapy, such as a valvular vegetation, a pedunculated mural thrombus, or a left atrial mass or thrombus.

If transthoracic and transesophageal echocardiography are normal or reveal a cardiac finding only weakly associated with stroke (such as mitral valve prolapse),<sup>18</sup> the possibility of a paradoxical embolism should not be overlooked. Paradoxical embolism occurs when material originating in the venous system or right side of the heart bypasses the pulmonary capillary bed to reach the systemic circulation via a right-to-left shunt. Paradoxical embolism has been a difficult diagnosis to establish clinically. Recently, however, it has become possible to noninvasively demonstrate intracardiac shunts due to an atrial septal defect or a patent foramen ovale by means of air-contrast echocardiography. With this technique, intracardiac shunts have been documented in 40 percent of a series of ischemic stroke patients under fifty-five years of age,<sup>18</sup> compared to a rate of 10 percent<sup>18</sup> to 18 percent<sup>19</sup> in nonstroke controls. If an intracardiac shunt is present and a right-sided source of embolism can be documented, then the diagnosis of paradoxical embolism is strongly supported and appropriate therapy may be instituted. In the absence of a demonstrable right-sided source of embolism, a patent foramen ovale must be considered as only a potentially relevant factor and other causes of stroke must be vigorously

sought. If other potential causes of stroke are excluded, presumptive diagnosis of paradoxical embolism may be justified.<sup>16</sup>

The role of mitral valve prolapse in the pathogenesis of stroke is undergoing re-evaluation. While some<sup>16</sup> case-control studies suggest an increased risk of stroke in patients with mitral valve prolapse, the magnitude of this risk is estimated to be quite low, approximately 1 in 11,000 (<0.01 percent) per year.<sup>16</sup> Since mitral valve prolapse is quite common in young adults (approximately 15 percent of females and 3 percent of males), it is not appropriate to ascribe a stroke to mitral valve prolapse until other more probable etiologies have been excluded. It is possible that certain subtypes of mitral valve prolapse are more strongly linked to stroke, although the epidemiologic evidence for this is lacking.

Like mitral valve prolapse, migraine and the use of oral contraceptives, sympathomimetic agents, or illicit drugs are very prevalent among young adults. Therefore, they should be considered the cause of a stroke only after a complete evaluation has excluded other etiologies.

### Migraine and Stroke

If the mechanism of migrainous auras such as scintillating scotomata is cerebral vasoconstriction,<sup>20</sup> as has been widely presumed, then migraine is undoubtedly the most common cause of transient cerebral ischemia. Much less clear, however, is the frequency with which migraine produces ischemic cerebral infarction as a consequence of prolonged, severe vasoconstriction, perhaps complicated by thrombosis at the site of vasospasm. Thrombosis may be promoted by increased platelet aggregability in migraine.<sup>21</sup> Another hypothesis regarding the pathophysiology of migraine holds that its central nervous system (CNS) symptoms are due to transient neuronal dysfunction mediated by brainstem regulating centers. In this model, based on a phenomenon known as spreading depression of Leao, vasoconstriction is regarded as secondary to reduced neuronal metabolism and diminished demand for blood flow.

Recent studies of stroke in young people have suggested that migraine is the cause in 6 to 16 percent, but reliable ascertainment is difficult in the absence of definitive diagnostic markers for migraine.<sup>22</sup> Although it is commonly held that migrainous stroke is most likely to occur with coincident headache and in patients with prior complicated transient ischemic attack (TIA-like) migraine episodes, there is evidence that migrainous stroke can occur in patients with *common* migraine, as an initial manifestation of migraine, and without accompanying headache.<sup>22</sup> In part, this confusion relates to heretofore excessively stringent criteria for the diagnosis of migraine; there is growing belief that "tension" and migraine headache share a common pathophysiologic mechanism.

Women seem to be at higher risk for migrainous



stroke than men,<sup>22</sup> perhaps reflecting the female preponderance of migraines. However, oral contraceptives and estrogen replacement therapy can trigger migraine, perhaps accounting for some of the sex difference in migrainous stroke incidence. The possible association between oral contraceptive use and stroke in young women may be mediated through migrainous vasospasm in addition to hypercoagulability. Other factors implicated as causes of stroke in the young, such as sympathomimetic drugs and pregnancy, may similarly act by provoking migraine.

Migrainous stroke tends to occur in the posterior circulation, consistent with the usual localization of migrainous auras.<sup>21,22</sup> Abnormal computed tomography (CT) and MR scans showing predominantly posterior circulation strokes have been reported in migraine patients not only with clinically-apparent events but also without stroke histories.<sup>21</sup> These data suggest that migrainous strokes can occur subclinically and are even more common than published studies of young stroke patients indicate. Cerebral angiography can usually be safely performed and may be normal or may show irregularity or occlusion of large or small intracranial vessels.<sup>22</sup> As already mentioned, migrainous stroke is a diagnosis of exclusion that should not be made until thorough evaluation has eliminated other stroke causes.

Patients with migrainous stroke tend to have favorable outcomes and a low recurrence rate.<sup>21,22</sup> The possibility of recurrence can be minimized by appropriate prophylactic measures. Treatment begins with avoidance of migraine trigger factors such as chocolate, caffeine, tyramine-containing and nitrite-processed foods, oral contraceptives, estrogen replacement therapy, and decongestant medications. Useful migraine-preventive medications include calcium antagonists such as verapamil, beta blockers such as nadolol and propranolol, and tricyclic antidepressants such as nortriptyline. Low dose aspirin may be a prudent addition.

### Oral Contraceptives and Stroke

Epidemiologic studies employing both case-control and cohort methodologies have implicated oral contraceptive use as a risk factor for ischemic stroke and, less consistently, SAH.<sup>23</sup> Studies have found the risk of oral contraceptive use was increased among smokers; this may be particularly true for SAH.

The available data on oral contraception and stroke risk suffer from a number of limitations. First and foremost, no studies have been published addressing the stroke risk of the currently used low dose estrogen preparations (less than 50 micrograms). Second, little attention has been paid to the progestogen component of oral contraceptives as a possible contributor to cardiovascular risk. Third, it is not known whether migraine, even complicated migraine, increases the stroke risk of oral contraceptive users. Nevertheless, pending further studies, it would be prudent to not use

oral contraceptives in patients who have classic or complicated migraine, in patients who have had a transient ischemic attack or stroke, or in patients who smoke, have hypertension or have other predisposing factors for stroke.

### Drug Use and Abuse

Use and misuse of a variety of drugs are increasingly recognized as contributing to ischemic and hemorrhagic stroke in young adults. The list of drugs includes heroin, cocaine (especially "crack"), amphetamines (dextroamphetamine and methamphetamine), over-the-counter sympathomimetics (phenylpropanolamine, ephedrine, pseudoephedrine), "T's and Blues," lysergic acid diethylamide (LSD), phencyclidine (PCP), and alcohol (Table 3).<sup>24-27</sup>

Of the reported cases of stroke, the age range is perinatal to sixty-three years, with most cases occurring in the third and fourth decades. Symptoms frequently occur immediately or within hours after intravenous, intramuscular, oral, inhalational or intra-arterial administration of the offending agent, but may be delayed as long as two to three weeks after exposure. Symptoms can occur upon first exposure or after re-exposure to the agent following prolonged abstinence. The types of cerebrovascular events that occur include TIAs, anterior and posterior circulation ischemic stroke (in both large and small vessel territories), parenchymatous hemorrhage, SAH, and intraventricular hemorrhage.<sup>24-26</sup>

Multiple mechanisms may account for strokes related to drug use. Ischemic strokes can be due to embolization of administered foreign material, vasospasm, vasculitis and other immunologic mechanisms, enhanced platelet aggregation and thromboxane beta-2 production, decreased fibrinolytic activity, and cardiac dysfunction or arrhythmias.<sup>24,26</sup> Subarachnoid and intracerebral hemorrhage can result from unmasking pre-existing lesions, such as aneurysms, AVMs, and tumors by hypertensive responses to offending agents, particularly cocaine. Hemorrhage may also be caused by transient hypertension and sud-

**Table 3. Stroke and Drug Use/Abuse:  
Comparative Frequency of Stroke Subtypes**

Drug	Ischemic				
	TIA	Stroke	ICH	SAH	IVH
Alcohol		*	*	**	
Heroin		***	**	*	
Cocaine	*	***	****	***	*
Amphetamine			**		
Methamphetamine		*	*	*	
Methylphenidate		*			
Phenylpropanolamine		*	****	*	
Ephedrine			*		
Pseudoephedrine			*		
Phencyclidine			*	*	
LSD		*			
"T's and Blues"		**	*		

ICH = intracranial hemorrhage; IVH = intraventricular hemorrhage



den excessive perfusion into a normal vascular bed which cannot compensate for the increased pressure head (breakthrough perfusion). Other mechanisms leading to hemorrhage include vasculitis and other immunologic phenomena, enhanced plasminogen activator activity, and induction of microaneurysms with subsequent rupture. Of importance is the fact that patients may be normotensive or have rapidly resolving hypertension when first seen.<sup>24-26</sup> It may be difficult to define the stroke mechanism and causative agent in individual cases because patients frequently abuse multiple drugs, often of unknown composition, and synergism between the pharmacologic and pathophysiologic actions of multiple drugs may occur.<sup>24</sup>

Limited data exist to suggest the role or risk of stroke associated with drug use or abuse. Of concern is the apparent increase in reported cases of stroke associated with cocaine use. In one study at an urban university hospital, the proportion of stroke cases historically associated with drug use/abuse was conservatively estimated to be 10 to 15 percent.<sup>27</sup> In only a small number of case reports has there been mention of stroke risk factors.<sup>26</sup> From an epidemiologic perspective, it is still unknown to what extent drug(s) may be implicated in the causation of symptoms in patients with or without pre-existing stroke risk factors or vascular or other lesions. It is unclear whether drug use/abuse is an independent risk factor for cerebral ischemia or hemorrhage or whether it merely potentiates or unmasks pre-existing vascular disease. The relative risk of ischemic stroke associated with alcohol consumption may only be increased at levels of three or more drinks daily. For hemorrhagic stroke, especially SAH, there appears to be a positive linear pattern of increasing risk at all levels of alcohol consumption.<sup>25</sup>

The patient, as well as the patient's family and friends, should be questioned about recent drug use. Needle marks and otherwise unexplained cardiac arrhythmias, tachycardia, and hypertension may suggest drug use. Samples of blood and urine should be obtained and screened for all potential agents as soon as possible; in some cases, repeated urine screens may be necessary. A number of methods have been developed for the laboratory evaluation of drug abuse.<sup>28</sup> Chromatographic methods include thin layer chromatography, gas liquid chromatography, high pressure liquid chromatography, and combined gas chromatography-mass spectroscopy in order of increasing specificity and cost. Competitive binding techniques include radioimmunoassay and enzyme multiplied immunoassay. In order to screen for all potential drugs, a battery of tests is frequently useful. After appropriate neurodiagnostic evaluation, treatment should be individualized and include measures to enhance drug elimination, when feasible.

### Hypercoagulability

Hypercoagulability, or the tendency for circulating blood to spontaneously initiate endogenous thrombus

formation, is a potential cause for stroke in the young patient.<sup>29</sup> This problem can lead directly to *in situ* thrombus formation in vessels associated with the CNS or give rise to emboli that lodge in these vessels.

A hypercoagulable state may be defined as a biochemical aberration of the blood or its contact surfaces that facilitates thrombus formation. In-depth understanding of the phenomenon is nearly completely lacking. It is not known what initiates an imbalance in the hemostatic mechanism. Recognition of the substance(s) responsible for the inciting event is particularly difficult because of the evanescence of the situation. In addition, these events occur directly in or on the edge of a rapidly moving stream of blood that is sizeable in volume. Opportunities to isolate this substance(s) are unlikely and nearly unthinkable at our present state of knowledge. Nonetheless, the existence of such a state is unquestioned and considerable thought has been given to this problem.<sup>30-32</sup>

The primary hypercoagulable states include an absence or dysfunction of substances normally present in the circulating blood that naturally modulate the hemostatic mechanism and prevent thrombus formation (Table 4). Abnormalities of these blood components usually present in the early years of life. Often, but not always, these disorders are familial in transmission.<sup>33</sup> Frequently, there is a history of recurrent thrombotic events. These events may occur in either the venous or arterial side of the circulation. Detection and quantification of these glycoproteins requires a specialized and sophisticated laboratory. It is important that blood determinations be performed at a time when the patient is in a nonstressed (physiological or emotional) steady state. Serial determinations are often necessary. When an abnormality is identified, family studies should be pursued.

The secondary hypercoagulable states are a group of disease entities or drugs having a high frequency of associated endogenous thrombosis (Table 4). Thrombus formation in this situation is a direct result of the underlying illness or medication. In these situations, when the illness or medications are removed, the problem of thrombosis disappears. Thrombosis associated with the various disorders in this group of secondary hypercoagulable states may occur anywhere in the body including the CNS, on either the venous or arterial side of the circulatory system. One exception to this somewhat generalized statement is paroxysmal nocturnal hemoglobinuria (PNH). In PNH, the thrombotic disease is limited to venous thrombosis in the abdomen, followed in frequency by thrombosis of the cerebral veins.

There are several conditions in which disordered platelets result in thrombus formation (Table 4). At the present time, it is understood that the thrombotic problems in these patients result from dysfunction of the platelets. Thrombosis observed in this group is not secondary to increased numbers of platelets. In all these disorders, thrombosis is seen in both arteries and veins. The mechanism whereby thrombosis takes place in those patients who experience thrombocytopenia



during heparin administration is not known. However, when thrombosis occurs in this setting, it is almost exclusively on the arterial side of the circulation.

There are several disease states where the target organ damaged is the blood vessel (Table 4). When the endothelium of the blood vessel is damaged or removed, thereby exposing subendothelial collagen, thrombosis is very common. Whenever vascular endothelium is distorted, there is prompt and uniform initiation of thrombus formation. This is readily demonstrated with normal and diseased blood vessels. Precisely how endothelial damage initiates thrombus formation remains obscure. Whether endothelial cells of vessels associated with the CNS are the same as vascular endothelial cells in other anatomical areas is in need of investigation.

The presence of a hypercoagulable state should be suspected clinically when a patient in the first three decades of life<sup>33</sup> presents with a thrombotic problem and has a history of recurrent thrombotic events. Suspicion should be raised further if there is no obvious

cause, the family history for such events is positive, and the thrombosis is in an unusual anatomic site such as the upper extremities, the neck, or the CNS. Presentation of simultaneous bilateral lower extremity thrombosis, or thrombosis despite therapeutic anticoagulation, should raise great concern about the presence of a hypercoagulable state. When any of these events occur, laboratory studies should be performed and consultation with a coagulation specialist obtained.

## Antiphospholipid and Stroke

The lupus anticoagulants (LAs) comprise a heterogeneous family of acquired antibodies (IgG, IgM, or mixed) which interfere with *in vitro* phospholipid-dependent coagulation reactions by inhibiting activation of prothrombin activator complex (factors V, Xa, calcium, and phospholipid). They frequently cause a prolonged activated partial thromboplastin time (aPTT) but *in vivo*, produce an increased tendency for systemic and cerebrovascular thrombotic events. Antiphospholipid (aPL), which includes LAs and closely related cross-reacting anticardiolipin (aCL), may produce a prothrombotic state by altering hemostatic function. Disturbances in endothelial function and platelet aggregation, altered prostacyclin synthesis, reduced levels of coagulation factors, and depressed fibrinolysis have all been reported in association with aPL. It is possible these mechanisms may be involved in producing cerebral ischemia and that they may differ among affected individuals.<sup>34-36</sup>

LAs have been most frequently associated with systemic lupus erythematosus (SLE) but have also been observed with phenothiazine, procainamide and phenytoin use, other autoimmune disease, the puerperium, stroke during pregnancy, spontaneous abortions, thrombocytopenia, AIDS, Lyme disease, Behcet's syndrome, and Sneddon's syndrome (livedo reticularis and cerebral ischemic events). On rare occasion, a familial occurrence of premature stroke has been reported.<sup>34,35</sup>

Approximately one third of patients with LAs, aCL, and cerebral ischemia have SLE, often associated with thrombocytopenia. Patients with LAs in the absence of SLE frequently have alternative explanations for their cerebral ischemia. Over 50 percent have definite and 20 percent have possible or probable stroke risk factors. This suggests the possibility of synergism between the LAs and aCL, and coexisting vascular disease.<sup>36</sup>

LAs of the IgG class appear more likely to occur in clinical thrombotic states, such as stroke, but this finding is controversial. Patients with markedly elevated levels may be at greatest risk.<sup>37</sup> Some studies suggest that patients with drug-induced LAs are also at high risk, while others do not.<sup>38</sup>

Limited data exist on the prevalence of aPL in young stroke patients. Among SLE patients seen at specialized clinics for evaluation of arterial or venous occlusive disease, the rate of positive LAs or aCL averages 68 percent and 64 percent, respectively. In

**Table 4. Hypercoagulability**

<b>Primary hypercoagulable syndromes</b>
Antithrombin-III deficiency
Protein C deficiency
Protein S deficiency
Protein Z deficiency
Dysfibrinogenemia
Procoagulant factor deficiency
Cystathionine beta-synthase deficiency
Antiphospholipid
Disorders of the fibrinolytic system
Hypoplasminogenemia
Dysplasminogenemia
Plasminogen activator deficiency
Increased plasminogen activator inhibitor 1(PAI-1)
<b>Secondary hypercoagulable states</b>
Abnormalities of coagulation - fibrinolysis
Malignancy - Trousseau's syndrome
Pregnancy - postpartum
Oral contraceptives
Prothrombin - complex concentrates
Nephrotic syndrome
Leukemia
Cushing syndrome
Estrogen therapy
Disseminated intravascular coagulation
Myeloproliferative diseases
Ulcerative colitis
Paroxysmal nocturnal hemoglobinuria
Abnormalities of platelets
Myeloproliferative disorders
Hyperlipidemia
Diabetes mellitus
Heparin-associated thrombocytopenia
Abnormal blood vessels and blood rheology
Venous stasis - vessel compression, immobilization, paraplegia, obesity, postoperative state
Artificial prosthetic surfaces
Vasculitis
Chronic occlusive arterial disease
Homocystinuria
Behcet's syndrome
Hyperviscosity - polycythemia, sickle cell anemia, leukoagglutination, dysglobulinemias
Thrombotic thrombocytopenic purpura



patients with non-SLE disorders and histories of thromboembolic events, the rate of positive LAs or aCL appears to be substantially less. However, the prevalence of LAs in unselected patients with thrombotic disease is low (<2 percent). One report of an unselected group of young stroke victims found that the prevalence of LAs was 4 percent. Results of a recent controlled study suggest a significant relationship (45.6 percent prevalence) between LAs and aCL, and cerebral infarction in young adults.<sup>34</sup>

A number of vascular syndromes have been described: amaurosis fugax, transient ischemic attacks, single or multiple strokes, retinal vein occlusion, retinal artery occlusion, and cortical vein thrombosis. Ischemia and infarction in both large and small vessel territories have been described, as well as precipitation of migraine-associated infarction. Patients may suffer a stroke as the initial manifestation of the LAs. Several patients have had multiple cerebral infarctions occurring over short to long time periods. In rare instances, patients may develop steplike or gradually progressive dementia associated with multiple cerebral infarctions or cerebral atrophy.<sup>35</sup>

Diagnostic evaluation has yielded variable results. Cerebral angiography has been normal or has shown large artery stenosis or occlusion.<sup>35</sup> Some patients may have potentially emboligenic mitral or aortic valve lesions similar to nonbacterial thrombotic endocarditis demonstrable by echocardiogram.<sup>35</sup> Pathological studies are limited, but suggest that vasculitis and atherosclerosis may not be of pathogenetic importance in individual cases.<sup>35</sup>

A number of tests with varying degrees of accuracy are available to detect the presence of the antibodies.<sup>37</sup> The most readily available tests include the VDRL serologic test for syphilis (cardiolipin is in the assay) and the aCL antibody test using either an enzyme-linked immunosorbent assay or a radioimmunoassay (RIA). The VDRL is positive in only 25 percent of patients and is too insensitive to be used as a screening test. Highly sensitive coagulation assays, such as the Russell viper venom time, kaolin clotting time, and the dilute-activated PTT require special hematologic expertise. Recommended criteria for diagnosis have recently been published.<sup>35</sup>

Optimal therapy for patients with aPL has not been defined. In one study, 13 percent of patients with cerebral infarction suffered recurrent stroke during a mean follow-up of approximately one year.<sup>35</sup> Chronic anticoagulation has been used and is not associated with an increased risk of bleeding complications. Some patients may respond to antiplatelet agents. Steroids and immunosuppressive drugs do not seem to be effective in reducing antibody titers or preventing recurrence of symptoms.<sup>34,35</sup>

### Summary

We have discussed some of the more common etiologic categories found in young patients with

stroke. Though many of the causes are rare, in the aggregate they account for many of the conditions leading to stroke. In Part II of this series (July 1991), we will explore some of the less common causes of stroke in the young and outline an approach to the patient.

### References

1. Hart RG, Miller VT. Cerebral infarction in young adults: A practical approach. *Stroke* 1983;14:110-4.
2. Bevan H, Sharma K, Bradley W. Stroke in young adults. *Stroke* 1990; 21:382-6.
3. Mettinger KL, Soderstrom CE, Allander E. Epidemiology of acute cerebrovascular disease before the age of 55 in the Stockholm County 1973-1977: Incidence and mortality rates. *Stroke* 1984; 15:653-60.
4. Collins JG. National Center for Health Statistics, 1988. Prevalence of selected chronic conditions, United States, 1983-1985. Advance data from vital and health statistics. No 155. DHHS Pub. No. (PHS) 88-1250. Public Health Service, Hyattsville, MD. 1989.
5. Nencini P, Inzitari D, Baruffi MC, Fratiglioni L, Gagliardi R, Benvenuti L, Bucheri AM, Cecchi L, Passigli A, Rosselli A, Amaducci L. Incidence of stroke in young adults in Florence, Italy. *Stroke* 1988; 19:977-81.
6. Toffol GJ, Biller J, Adams HP Jr. Nontraumatic intracerebral hemorrhage in young adults. *Arch Neurol* 1987; 44:483-5.
7. Mokri B, Houser OW, Sandok BA, Piepgras DG. Spontaneous dissections of the vertebral arteries. *Neurology* 1985; 38:880-5.
8. Ventureyra ECG, Herder S. Arteriovenous malformations in children. *Child Nerv Sys* 1987; 3:12-8.
9. Rigamonti D, Rekate H, Pittman H, Spetzler R. Cavernous malformations (angiomas) in children. *J Pediatric Neurosciences* 1988; 4:55-9.
10. Locksley HB. Report on the cooperative study of intracranial aneurysms and SAH. *J Neurosurg* 1966; 25:219-39.
11. Yatsu FM, Fisher M. Atherosclerosis: Current concepts on pathogenesis and interventional therapies. *Ann Neurol* 1989; 26:3-12.
12. Iso H, Jacobs DR Jr, Wentworth D, Neaton JD, Cohen JD. Serum cholesterol levels and six-year mortality from stroke in 350,977 men screened for the multiple risk factor intervention trial. *N Engl J Med* 1989; 320:904-10.
13. Adams RJ, Carroll RM, Nichols FT, McNair N, Feldman DS, Feldman EB, Thompson WO. Plasma lipoproteins in cortical versus lacunar infarction. *Stroke* 1989; 20:448-52.
14. Mendez E, Hachinski V, Wolfe B. Serum lipids after stroke. *Neurology* 1987; 37:507-11.
15. Adams HP Jr, Butler MJ, Biller J, Toffol GJ. Nonhemorrhagic cerebral infarction in young adults. *Arch Neurol* 1986; 43:793-6.
16. Cardiogenic brain embolism: The second report of the cerebral embolism task force. *Arch Neurol* 1989; 46:727-43.
17. Pop G, Sutherland GR, Koudstall PJ, Sit TW, deJong G, Roelandt JR. Transesophageal echocardiography in the detection of intracardiac embolic sources in patients with transient ischemic attacks. *Stroke* 1990; 21:560-5.
18. Lechat P, Mas JL, Lascual G, Loron P, Theard M, Klimczak M, Drobinski G, Thomas D, Grosgeat Y. Prevalence of patent foramen ovale in patients with stroke. *N Engl J Med* 1988; 318:1148-52.
19. Lynch JJ, Schurchard GH, Gross CM, Wann LS. Prevalence of right-to-left atrial shunting in a healthy population: Detection by valsalva maneuver contrast echo-cardiography. *Am J Cardiol* 1984; 53:1478-80.
20. Tatemichi TR, Mohr JP. Migraine and stroke. In: Barnett HJM, Mohr JP, Stein BM, Yatsu FM, eds. *Stroke: Pathophysiology, Diagnosis and Management*. New York: Churchill Livingstone. 1986:845-68.
21. Bartleson JD. Transient and persistent neurological complications of migraine. *Stroke* 1984; 15:383-6.
22. Broderick JP, Swanson JW. Migraine-related strokes: Clinical profile and response in 20 patients. *Arch Neurol* 1987; 44:868-71.
23. Stolley PD, Strom BL, Sartwell PE. Oral contraceptives and vascular disease. *Epidemiol Rev* 1989; 11:241-3.

# The Johns Hopkins Hospital



## PHYSICAL THERAPY OCCUPATIONAL THERAPY PHYSIATRY CONSULTATION SERVICE

Providing Rehabilitation Services  
including specialties in the areas of:

### SPINE REHABILITATION

- Spinal evaluation and treatment
- Back School Education
- Postoperative back evaluation and treatment

### ORTHOPEDECS

- Postoperative joint rehabilitation
- Rehabilitation of musculoskeletal injury
- Foot Orthotic evaluation/fabrication
- Prosthetic training
- TMJ

### PEDIATRICS

- Evaluation and treatment of premature infants through adolescents
- Cystic Fibrosis Pulmonary and Exercise Programs

### NEUROSCIENCES

- Chronic Pain Management
- Evaluation and treatment of neurological disorders
- Geriatric Fall Precautions Screening
- Multiple Sclerosis Patient Screening

### MEDICINE

- Geriatric Assessment
- Arthritis evaluation and treatment
- High Risk Pregnancy
- AIDS Rehabilitation

### SURGERY

- Amputee Rehabilitation
- Early postoperative intervention
- Postoperative organ transplantation rehabilitation

### ONCOLOGY

- Rehabilitation Post Bone Marrow Transplantation
- Leukemia Rehabilitation

### CARDIAC REHABILITATION

- Postoperative intervention
- Postoperative Heart, Lung and Heart/Lung Transplant Rehabilitation
- Phase 1 Cardiac MI program

### PSYCHIATRY

- Pediatrics through Geriatrics
- Inpatient, Day Hospital, Outpatient

### HANDS

- Static and Dynamic Orthotics
- Hand Surgery/Cumulative Trauma Rehabilitation

## THE JOHNS HOPKINS HOSPITAL

For more information on our inpatient and outpatient programs contact:

### The Rehabilitation Medicine Department

Osler 159

600 North Wolfe Street

Baltimore, Maryland 21205

(301) 955-5693

# QUALITY

## THE HOPKINS TRADITION

24. Caplan LR, Hier DB, Banks G. Stroke and drug abuse. *Stroke* 1982; 13:869-72.

25. Gorelick PB. The status of alcohol as a risk factor for stroke. *Stroke* 1989; 20:1607-10.

26. Levine SR, Brust JCM, Futrell N, Ho K-L, Blake D, Millikan CH, Brass LM, Fayad P, Schultz LR, Seliva JF, Welch KMA. Cerebrovascular complications of the use of "crack" form of alkaloidal cocaine. *N Engl J Med* 1990; 323:699-704.

27. Sloan MA, Kittner SJ, Rigamonti D, Price TR. Incidence of stroke associated with drug use/abuse. *Neurology* 1990; 40(suppl.1):251.

28. Gold MS, Dackis CA. The role of the laboratory in the evaluation of suspected drug abuse. *J Clin Psychiatry* 1986; 47(Suppl 1):17-23.

29. Hart RG, Kanter MC. Hematologic disorders and ischemic stroke. *Stroke* 1990; 21:1111-21.

30. Bauer KA, Rosenberg RD. The pathophysiology of the prethrombotic state in humans. *Blood* 1987; 70:343-50.

31. Schafer AI. The hypercoagulable states. *Ann Intern Med* 1985; 102:814.

32. Wessler S. The current status of the hypercoagulable state. In: Joise JH, Sherman LA, eds. *Venous and arterial thrombosis*. New York: Greene & Stratton. 1979:23-31.

33. Rodgers GM, Shuman MA. Congenital thrombotic disorders. *Am J Hematol* 1986; 21:419-30.

34. Brey RL, Hart RG, Sherman DG, Tegeler CH. Antiphospholipid antibodies and cerebral ischemia (CI) in young people. *Neurology* 1990; 40:1190-96.

35. Levine SR, Deegan MJ, Futrell N, Welch KMA. Cerebrovascular and neurologic disease associated with antiphospholipid antibodies: 48 cases. *Neurology* 1990; 40:1181-89.

36. Levine SR, Welch KMA. Cerebrovascular ischemia associated with lupus anticoagulant. *Stroke* 1987; 18:257-63.

37. Harris EN, Chan JKH, Asherson RA, Aber VR, Gharavi AE, Hughes GRV. Thrombosis, recurrent fetal loss, and thrombocytopenia. *Arch Intern med* 1986; 146:2153-56.

38. Triplett DA, Brandt JT, Musgrave KA, Orr CA. The relationship between lupus anticoagulants and antibodies to phospholipid. *JAMA* 1988; 259:550-4.

The Young Stroke Study Group is establishing a registry of stroke in children and young adults in Maryland and Washington DC. We are monitoring hospital discharges and conducting detailed chart reviews. Our short-term objectives are to learn more about the clinical features and risk factors for stroke in the young.

Participating hospitals include: AMI Doctor's Hospital of Prince George's County Medical Center, Baltimore County General Hospital, Bon Secours Hospital, Church Hospital Corporation, Francis Scott Key Medical Center, Franklin Square Hospital Center, Georgetown University, George Washington University Medical Center, Greater Baltimore Medical Center, Greater Laurel-Beltsville Hospital, Harbor Hospital Center, Holy Cross Hospital of Silver Spring, Homewood Hospital Center, Howard County General Hospital, The Johns Hopkins Hospital, Leland Memorial Hospital, Liberty Medical Center, Maryland General Hospital, Mercy Medical Center, Montgomery General Hospital, Prince George's Hospital Center, Saint Agnes Hospital, Saint Joseph Hospital, Sinai Hospital of Baltimore, Union Memorial Hospital, and the University of Maryland Medical Center.



---

# The Automatic Implantable Cardioverter-Defibrillator: Update 1990

---

Enrico P. Veltri MD, Diana Aarons RN and Juan Juanteguy MD

---

---

*The automatic implantable cardioverter-defibrillator (AICD) has become the landmark breakthrough in therapy for patients at high risk for sudden cardiac death.*

---

*From the Departments of Medicine and Surgery, Sinai Hospital of Baltimore, Baltimore, MD, where Dr. Veltri is Director, Division of Cardiology; Ms. Aarons is Clinical Research Nurse, Sudden Death Prevention Program; and Dr. Juanteguy is Director, Division of Cardiothoracic Surgery. Reprints: Enrico P. Veltri MD, Division of Cardiology, Sinai Hospital of Baltimore, 2401 West Belvedere Ave., Baltimore, MD.*

Sudden cardiac death is the leading cause of cardiac mortality, accounting for approximately 50 percent of all deaths from heart disease. In the United States alone, 400,000 such deaths occur annually.<sup>1</sup> Tragically, such episodes may occur in the prime of life and only one of five individuals suffering out-of-hospital cardiac arrest survive to hospital discharge. It has been established that the vast majority of sudden cardiac death is due to ventricular tachyarrhythmias, with approximately 20 percent of these cases due to identifiable etiology such as acute myocardial infarction.<sup>2,3</sup> Those at high risk for sudden cardiac death are survivors of out-of-hospital cardiac arrest without identifiable causes and patients with recurrent ventricular tachycardia with underlying heart disease, particularly those with remote myocardial infarction with associated poor left ventricular function or cardiomyopathy. In such patients, the automatic implantable cardioverter-defibrillator (AICD) has been the landmark breakthrough in therapy.<sup>4</sup>

## Historical Perspective

The concept of an automatic implantable device that would monitor cardiac rhythm continuously and then automatically deliver an electrical discharge across the heart following the detection of a life-threatening ventricular tachyarrhythmia was first conceived by Dr. Michel Mirowski in the late 1960s in Israel. His friend, colleague, and mentor had died from sudden cardiac death. In 1968, Dr. Mirowski immigrated to Baltimore, assuming the position of Director of the Coronary Care Unit at Sinai Hospital. With 50 percent of his time committed to this clinical research project, and assisted by Dr. Morton Mower and others, the first model of the automatic implantable defibrillator became manifest in 1969.<sup>5</sup> The device was first successfully tested in a canine model.<sup>6</sup> Following more than a decade of further testing and development, notwithstanding considerable negative criticism and lack of out-

side research funding, the first device was implanted in a human at The Johns Hopkins Hospital in 1980.<sup>7</sup> After five subsequent years of clinical testing, the refined model of the device, now known as the automatic implantable cardioverter-defibrillator or AICD, was approved by the Food and Drug Administration in 1985. Experience with this device had demonstrated a significant reduction in expected mortality due to sudden cardiac death in high-risk patients.<sup>8</sup>

The device is composed of three components: the sensing leads, the defibrillating leads, and the pulse generator. The latter is the brains of the system. It is an encased shell of titanium, hermetically sealed, weighing approximately 250 grams, and containing specifically designed lithium batteries, capacitors, and logic circuits. The sensing leads are bipolar electrodes placed either endocardially (such as routine pacemaker lead) or more commonly, epicardially. These leads are used to sense the transcardiac electrogram representing the heart rate. These leads also allow for synchronization of the shock to the R wave of the electrogram. The defibrillating leads typically are paired titanium patches (or mesh) which are placed epicardially and serve as anode-cathode pairs for the shock delivery. These leads may also be used for sensing the morphology of the transcardiac electrogram, potentially differentiating supraventricular (narrow QRS complex) from ventricular (wide QRS complex) tachyarrhythmias. Figure 1 depicts the AICD pulse generator and representative lead systems.

When the sensing algorithm criteria (heart rate alone or heart rate plus morphology) have been satisfied, the batteries charge the capacitors, and a twenty-five to thirty joule monophasic truncated exponential pulse is delivered via the patch leads to the heart. For any one continuous episode of ventricular tachyar-

rhythmia, five sequential electrical discharges can be delivered by the device to terminate the arrhythmia.

Battery longevity of the AICD is dependent upon proper maintenance (i.e., a noninvasive device checks to reform the battery capacitors and the number of shocks delivered). Current devices have an expected battery life of three years.

### Indications and Contraindications

The present criteria for implantation of the AICD include at least one previous documented episode of out-of-hospital, hypotensive, sustained ventricular tachycardia or ventricular fibrillation; the absence of an identifiable, correctable cause of sustained ventricular tachyarrhythmias (such as acute myocardial infarction, electrolyte imbalance, or drug toxicity); refractoriness to antiarrhythmic drug therapy as assessed by Holter monitoring and electrophysiologic testing; and the absence of other noncardiac medical illnesses limiting expected life span to less than six months.<sup>9</sup> In some instances, patients presenting with recurrent syncope of undocumented origin and refractory inducible sustained ventricular tachycardia have undergone AICD implantation.<sup>10</sup>

Contraindications to device implantation include incessant ventricular tachyarrhythmias, New York Heart Association Class IV heart failure, and unipolar pacemakers. In the latter group of patients, AICD implantation can be performed once the pacemaker has been converted to a bipolar configuration.

### Pre-implantation Evaluation

Cardiac diagnostic procedures need to be performed to assess underlying cardiac substrate (coronary disease, cardiomyopathy, or valvular disease), as well as to assess the cardiac impulse generation and conduction system. Such testing must include a 12-lead electrocardiogram, echocardiography or radionuclide imaging of ventricular function, exercise stress testing, Holter monitoring, coronary angiography, and electrophysiologic testing.

### Implantation Procedure

There are presently four surgical approaches for implantation of the AICD.<sup>11</sup> Patients requiring concomitant cardiac surgery (coronary bypass, aneurysmectomy, valvular replacement) undergo a median sternotomy. Patients with previous cardiac surgery, pericarditis, or enlarged hearts undergo anterior-lateral thoracotomy. Other patients may either undergo a subcostal or subxiphoidal approach per the preferences of the implanting physician.

At the time of implantation, defibrillation threshold testing is performed to assess the



**Figure 1.** Depicts the AICD pulse generator and the sensing leads (intramural sutureless) and defibrillating leads (titanium patches).



minimum energy required to convert the tachyarrhythmia. The minimum acceptable defibrillation threshold is twenty joules. Conversion testing with the AICD must be confirmed at implantation.

### Clinical Experience

From November 1982 through September 1990, 147 patients underwent AICD implantation at Sinai Hospital of Baltimore. The Table depicts the patient population. There were 112 males and thirty-five females; mean age was sixty-one years. Sixty-five percent of patients had underlying coronary artery disease and 23 percent had nonischemic cardiomyopathy. The mean left ventricular ejection fraction was moderately depressed at 36 percent. Eighty-seven patients (59 percent) had experienced one previous cardiac arrest. At baseline electrophysiologic heart catheterization, sustained ventricular tachycardia or fibrillation was induced in 107 patients (73 percent), nonsustained ventricular tachycardia (<thirty seconds duration, spontaneously terminated) in eleven patients (7 percent), and twenty-nine patients (20 percent) had no inducible ventricular tachyarrhythmias. The patients had failed a mean of three serial antiarrhythmic drug trials in an attempt to suppress inducible ventricular tachyarrhythmias.

There were no intraoperative deaths. Ten patients died in the hospital within thirty days of surgery for an

operative mortality of 6.8 percent. Five deaths were due to incessant ventricular tachyarrhythmias, three deaths were from refractory congestive heart failure, and two deaths were noncardiac. Major nonfatal complications included pneumothoraces in four patients, pericardial tamponade in three patients, and adult respiratory distress syndrome in two patients (likely secondary to concomitant amiodarone therapy).

AICD system infection occurred in nine patients. This involved the AICD pulse generator pocket in eight and the lead in one. The infections were related to pocket erosion in four (spontaneous in three, secondary to pocket hematoma following a fall in one), lead erosion in one, subsequent intestinal surgery with contamination of the AICD pocket in one, and after pulse generator replacement for end-of-battery life in two. In five patients, total AICD system explantation without reimplantation was performed.

Following a mean twenty-three day hospitalization, patients were discharged and followed  $26 \pm 21$  months ( $\pm$  standard deviation). At follow-up, ninety-eight patients were alive, and thirty-nine patients had out-of-hospital death. Cardiac deaths were from congestive heart failure in thirteen, sudden deaths in eight, incessant ventricular tachyarrhythmias in five, and myocardial infarction in two. There were eleven noncardiac deaths.

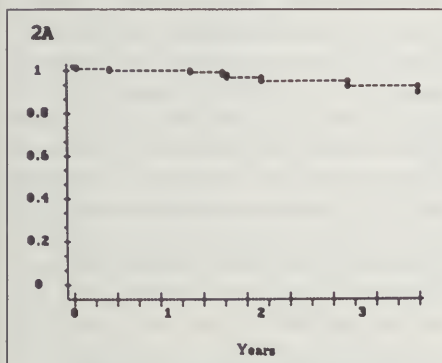
Figures 2A, 2B, and 2C depict the actuarial incidence of sudden cardiac death, cardiac death, and all cause death, respectively, in the patient population. Sudden cardiac death was 2 percent, 6 percent, and 10 percent at one, two, and three years, respectively. Cardiac death was 7 percent, 16 percent, and 26 percent at one, two, and three years, respectively. All cause death was 10 percent, 24 percent, and 35 percent at one, two, and three years, respectively.

Forty-eight patients (49 percent) discharged from the hospital had at least one out-of-hospital appropriate AICD discharge (i.e., associated with presyncope, syncope, or documented sustained ventricular tachycardia on continuous electrocardiographic monitoring). Thirty-eight patients (39 percent) had at least one asymptomatic discharge, mostly from sinus tachycardia or atrial fibrillation with ventricular response above the rate detection cutoff of the device.

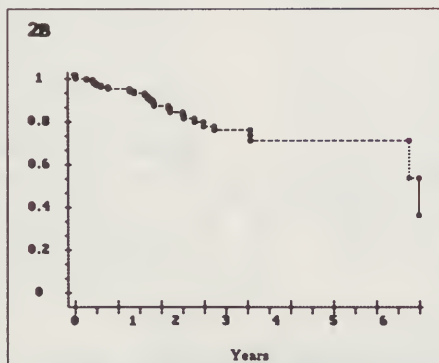
**Table. Patient Population Characteristics**

Total	147
Male/Female	112/35
Age (years)	$61 \pm 13^*$
Cardiac Disease	
Coronary	96
Cardiomyopathy	34
Mitral Prolapse	8
Primary Electrical	5
Valvular	2
Long QT	1
Spasm	1
Ejection Fraction (%)	$36 \pm 17^*$
Previous Drugs Failed	$3.0 \pm 1.8^*$
Follow-up (months)	$26 \pm 21^*$

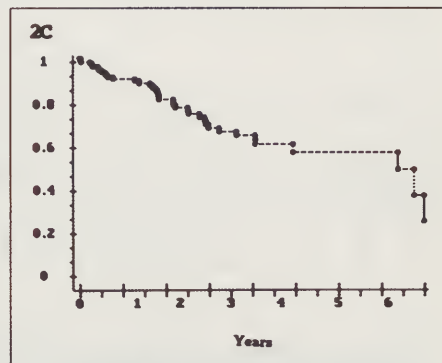
\* Mean  $\pm$  standard deviation



**Figure 2A.** Depicts the actuarial incidence of sudden cardiac death.



**Figure 2B.** Depicts the actuarial incidence of cardiac death.



**Figure 2C.** Depicts the actuarial incidence of all cause death.

Of those patients with unmonitored asymptomatic discharges, asymptomatic sustained ventricular tachycardia or nonsustained ventricular tachycardia could not be excluded with certainty. Figures 3 and 4 depict appropriate and asymptomatic AICD discharges, respectively.

### AICD Interaction

Concomitant therapy with antiarrhythmic drugs or permanent pacemakers is often necessary in the treatment of patients with the AICD. However, adverse interaction between these modalities of treatment have been reported.<sup>12,13</sup>

Antiarrhythmic drugs interact adversely with the AICD in one of three ways. First, they may increase the energy requirement to defibrillate the heart. Second, they may slow the rate of ventricular tachycardia below the rate cutoff of the device. Third, they may change the morphologic characteristics of the ventricular tachyarrhythmias so as to alter the morphology sensing criteria from being achieved. These phe-

nomena, therefore, require the testing of the device in the presence of the prescribed antiarrhythmic drug to assure satisfactory sensing and termination of the patient's arrhythmia.

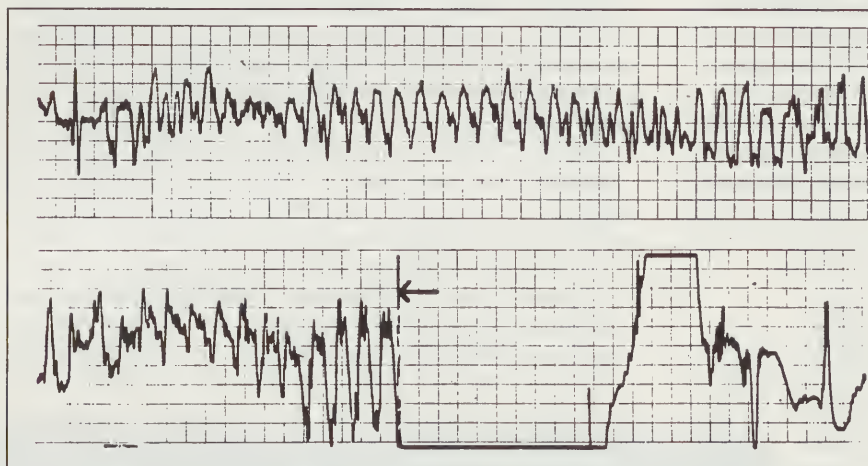
Interactions with pacemakers are based on the sensing capability of the AICD. The pacemaker artifact may be recognized as an R wave and thus, is potentially counted toward meeting the rate cutoff of the AICD, or overriding the sensing of the patient's intrinsic heart rhythm. These interactions are avoided by implanting bipolar pacemakers (decreasing the amplitude of the pacemaker artifact), implanting the pacemaker lead and the AICD sensing leads as far apart as possible (to minimize cross-talk), and testing for pacemaker-AICD interactions at implantation by pacing at maximum pacing output, with ultimate programming of the pacemaker to a minimum, safe output for capture.

### Comparison to Other Therapy

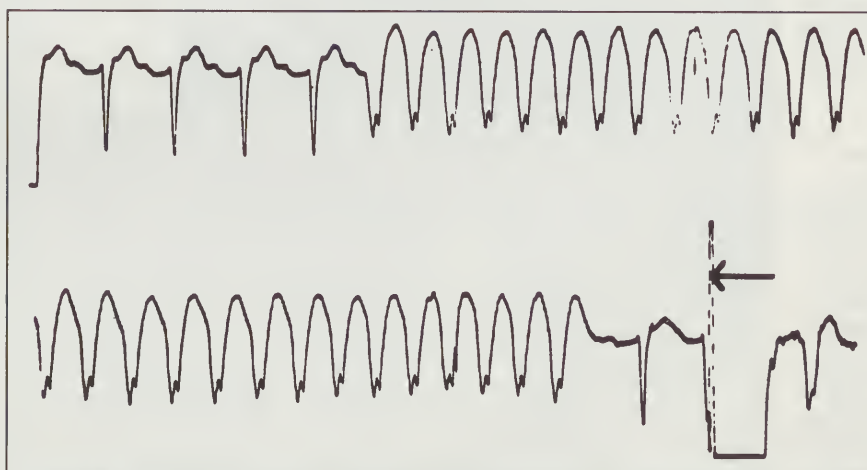
The treatment of ventricular tachyarrhythmias includes antiarrhythmic drugs, surgical ablation of substrate, and device therapy. Empiric drug therapy is not advised due to the serious consequences of tachyarrhythmic recurrence. Previous historical control studies have revealed a 30 to 45 percent recurrence of cardiac arrest in such patients.<sup>23</sup> Overall, pharmacologic therapy assessed by either noninvasive (Holter monitoring) or invasive (electrophysiologic testing) has been shown to be effective in only 20 to 50 percent of patients. Indeed, patients presenting with cardiac arrest, hemodynamically unstable sustained ventricular tachycardia, and moderate to severe left ventricular dysfunction predictably do poorly using antiarrhythmic drug therapy alone.<sup>14,15</sup> Furthermore, side effects from antiarrhythmic drugs are numerous and include aggravation of arrhythmias (proarrhythmia).

Surgical therapy includes heart transplantation (for those patients with Class IV heart failure) and electrophysiologic-map-guided endocardial resection. The latter surgical approach has a 12 percent operative mortality and approximate 20 percent arrhythmia recurrence in two years.<sup>16</sup> Notwithstanding, patients with noninducible ventricular tachycardia, or cardiomyopathy without discrete scar or aneurysm, and those with poor left ventricular function are not candidates for surgical resection of the arrhythmogenic focus or circuit.

The impressive reduction of expected



**Figure 3.** Continuous electrocardiogram of sustained pleomorphic ventricular tachycardia being terminated by the automatic implantable cardioverter-defibrillator discharge (arrow).



**Figure 4.** Continuous electrocardiogram of an asymptomatic, self-terminating run of ventricular tachycardia with an automatic implantable cardioverter-defibrillator discharge (arrow) one second after spontaneous termination.



sudden cardiac death incidence by the AICD in high-risk patients has led to its being referred to as the gold standard for cardiac arrest survivors.<sup>17,18</sup> The present authors would suggest that AICD implantation should be the therapy of first choice in patients with documented cardiac arrest, noninducible arrhythmia, and poor left ventricular function (ejection fraction < 30 percent or Class II-III heart failure); in patients with hemodynamically compromising sustained ventricular tachycardia and poor left ventricular function (as defined above) irrespective of response to electrophysiologic-guided drug therapy; in patients with sustained ventricular tachyarrhythmias and associated nonischemic cardiomyopathy; and in those patients for whom antiarrhythmic drug efficacy cannot be adequately assessed or in whom patient compliance with such therapy may be questionable.

### Future Directions

A decade has now passed since the first human implant of the AICD. Indeed, over 13,000 devices have been implanted worldwide. This device, which delivers a high energy shock to automatically terminate life-threatening ventricular tachyarrhythmias, has revolutionized therapy for patients at high risk for sudden cardiac death. As growing numbers of patients at risk are being identified (even before their first cardiac arrest) and increasing numbers of hospital centers are developing clinical arrhythmia services with electrophysiologic testing facilities, AICD implantation will become the major treatment option.

Research goals must include the early identification of patients for sudden cardiac death and the continued technological development of devices with multiple functions such as bradycardia pacing, antitachycardia pacing, low energy cardioversion, and defibrillation. Programmable features for rate cutoff, new morphology sensing, other energy wave forms, delay times and noncommitted modes for shock, noninvasive telemetry monitoring and transtelephonic interrogations, and settings for tiered approach for delivery of the electrical treatment options will be developed and tested. Of paramount importance will be the use of hemodynamic sensing functions to provide clinically appropriate therapy and the testing of nonthoracotomy implantation systems.<sup>19,20</sup> With improvements in technology and with the competitive marketplace for industry, the cost of such therapy will decrease, as will the cost per life-year saved.<sup>21</sup> It is hoped that this will allow for enhanced physician and patient acceptance, with improved quantity as well as quality of life for implantees.

The dream of one great man with a simple idea has materialized despite all of the bumps in the road.

### References

1. Kuller L. Sudden death in arteriosclerotic heart disease: The case for preventive medicine. *Am J Cardiol* 1969; 24:617-642.
2. Liberthson RR, Nagel EL, Hirshman JC. Prehospital

ventricular defibrillation. Prognosis and follow-up course. *N Engl J Med* 1974; 29:317.

3. Shaffer WA, Cobb LA. Recurrent ventricular fibrillation and modes of death in survivors of out-of-hospital ventricular fibrillation. *N Engl J Med* 1975; 293:259.

4. Mirowski M. The automatic implantable cardioverter-defibrillator: An overview. *J Am Coll Cardiol* 1985; 6:461-6.

5. Mirowski M, Mower MM, Staewen WS et al. Standby automatic implantable defibrillator: An approach to prevention of sudden coronary death. *Arch Intern Med* 1970; 126:158-61.

6. Mirowski M, Mower MM, Langer A et al. A chronically implanted system for automatic defibrillation in active to conscious dogs: Experimental model for treatment of sudden death from ventricular fibrillation. *Circulation* 1978; 58:90-4.

7. Mirowski M, Reid P, Mower MM et al. Termination of malignant ventricular arrhythmias with an implanted automatic defibrillator in human beings. *N Engl J Med* 1980; 303:322-4.

8. Echt DS, Armstrong K, Schmidt P et al. Clinical experience, complications, and survival in 70 patients with the automatic implantable cardioverter-defibrillator. *Circulation* 1985; 71:289-96.

9. Veltri EP, Mower MM, Mirowski M et al. Follow-up of patients with ventricular tachyarrhythmia treated with the automatic implantable cardioverter-defibrillator: Programmed electrical stimulation results do not predict clinical outcome. *J Electrophysiology* 1989; 3:467-76.

10. Aarons D, Juanteguy J, Veltri EP. The use of the automatic implantable cardioverter-defibrillator in patients with syncope and refractory inducible sustained ventricular tachycardia. (submitted to JAMA).

11. Watkins L, Guarnieri T, Griffith LSC et al. Implantation of the automatic defibrillator: Current surgical techniques. *Clin Prog in Electrophysiology and Pacing* 1986; 4:286-91.

12. Guarnieri T, Levine JH, Veltri EP et al. Success of chronic defibrillation and the role of antiarrhythmic drugs with the automatic implantable cardioverter-defibrillator. *Am J Cardiol* 1987; 60:1061-64.

13. Calkins H, Brinker J, Veltri E et al. Clinical interactions between pacemakers and implantable defibrillators. *J Am Coll Cardiol* 1990; 16:666-73.

14. Lampert S, Lown B, Graboyes TB et al. Determinants of survival in patients with malignant ventricular arrhythmia associated with coronary artery disease. *Am J Cardiol* 1988; 61:791-7.

15. Wilber DJ, Garan H, Finklestein D et al. Out-of-hospital cardiac arrest: Use of electrophysiologic testing in the prediction of long-term outcome. *N Engl J Med* 1988; 318:19-24.

16. Borggrefe M, Podczek A, Ostermeyer J et al. Long-term results of electrophysiologically guided antitachycardia surgery in ventricular tachyarrhythmias: A collaborative report on 665 patients. In: Breithardt, Borggrefe, Zipes, eds. *Nonpharmacological therapy of tachyarrhythmias*. 1987; 109-25.

17. Winkle RA, Mead RH, Ruder MA et al. Long-term outcome with the automatic implantable cardioverter-defibrillator. *J Am Coll Cardiol* 1989; 13:1353-61.

18. Lehman MH, Steinman RT, Schuger CD et al. The automatic implantable cardioverter defibrillator as antiarrhythmic treatment modality of choice for survivors of cardiac arrest unrelated to acute myocardial infarction. *Am J Cardiol* 1988; 62:803-5.

19. Cohen TJ, Veltri EP, Mower MM. A hemodynamically responsive antitachycardia system: Theoretical basis for design. *J Electrophysiology* 1988; 2:352-85.

20. Saksena S, Parsonnet V. Implantation of a cardioverter defibrillator without thoracotomy using a triple electrode system. *JAMA* 1988; 259:69-72.

21. Kuppermann M, Luce B, McGovern B et al. An analysis of the cost effectiveness of the implantable defibrillator. *Circulation* 1990; 81:91-100.

### Acknowledgments

This manuscript is dedicated to our late colleague and friend, Dr. Michel Mirowski. We also thank Ms. Linda Schenker for her assistance in the preparation of this manuscript.

# MALPRACTICE INSURANCE



## CHECK!

Whether you have

- ☐ the right policy
- ☐ the right premium
- ☐ the right coverage

You may have a great policy, but it doesn't mean that it will be the best and most fitting to your present & future needs.

*If you have not checked all the boxes above, call us today.*

## ONAL AND ASSOCIATES, INC.

*Complete Insurance Services*

For more information, contact  
Korky Onal

**Telephone: (301) 859-1990 • FAX: (301) 684-3212**



518 S. Camp Meade Road, Suite 4  
Linthicum, Maryland 21090



---

# Calcitonin and the Treatment of Osteoporosis

---

Christine R. Schneyer MD

---

*Dr. Schneyer is Associate Director, Division of Endocrinology, Department of Medicine, Sinai Hospital of Baltimore, and Assistant Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD.*

---

*Calcitonin, a potent inhibitor of bone resorption, is an important agent for the treatment of osteoporosis. An analgesic effect of salmon calcitonin has also been reported. The recent development of calcitonin nasal spray should eliminate the need for injections.*

---

Osteoporosis is one of the most commonly encountered metabolic bone disorders affecting, predominantly, postmenopausal women. Characterized by excessive bone resorption, it causes biomechanical instability of the skeleton and results in an increased risk for fractures. Most frequently affected sites are the hip, spine, and distal forearm, but fractures of other bones occur as well. Osteoporosis is a major public health problem in the United States, causing more than 1.5 million fractures per year at a cost of seven to ten billion dollars in 1986.<sup>1</sup> In addition to financial considerations, there is an enormous impact from this debilitating disease on productivity, independence, and self-esteem. Because of the rapid increase in the elderly population in America, it is anticipated that the cost and personal suffering caused by osteoporosis will continue to rise.

The definitive diagnosis of osteoporosis is made by histologic examination, but the disease is frequently diagnosed clinically by the finding of low bone mass on noninvasive imaging studies. Treatment is aimed at stabilizing and increasing bone mass with the goal being the prevention of future fractures. In patients with established fractures, goals include improvement of mobility and reduction of pain.

Calcitonin is one of several treatments available for osteoporosis. This agent is a potent inhibitor of bone resorption<sup>2</sup> and has been approved by the Food and Drug Administration since 1984 for the treatment of this disease. It is an effective therapeutic agent for several other disorders characterized by excessive bone resorption (e.g., Paget's disease and hypercalcemic states, especially those secondary to malignancy). Until recently, this drug has been available only as an injectable medication, thereby limiting its widespread acceptance. The recent development of a calcitonin nasal spray, in conjunction with indications of a potent analgesic effect, should result in increased use of this agent for both prevention and treatment of osteoporosis. The purpose of this paper is to review studies evaluating the use of calcitonin in the treatment of osteoporosis and to define future research directions.

## General Properties of Calcitonin

Calcitonin was first discovered in 1962 and was so named because of its effect on lowering plasma calcium concentrations.<sup>3</sup> It is a peptide hormone of thirty-two amino acids synthesized predominantly by thyroid parafollicular or C cells; its secretion is stimulated by an increase in circulating ionized calcium. Calcitonins of slightly different structures have been isolated from many species. In humans, synthetic salmon calcitonin is often used therapeutically because of its prolonged half-life in the body compared with the human hormone.<sup>4</sup>

Despite intensive investigation, the precise physiologic role of calcitonin remains uncertain. It may function as a regulatory factor in the maintenance of skeletal homeostasis and calcium balance by inhibiting bone resorption through a direct action on osteoclasts.<sup>5</sup> It may also act through effects on the immune system, since calcitonin plasma membrane receptors have recently been identified on normal human T-lymphocytes;<sup>6</sup> this has led to the suggestion that skeletal effects of calcitonin may be mediated, at least in part, through osteotropic cytokines produced by lymphocytes. Lymphocyte receptors for both calcitriol, the active form of vitamin D,<sup>7</sup> and parathyroid hormone<sup>8</sup> have been previously identified, suggesting a role of the immune system in the control of bone metabolism.

### Calcitonin and the Development of Osteoporosis

It has been proposed that calcitonin deficiency may play an etiologic role in the development of osteoporosis. Circulating calcitonin levels are lower in women than in men, who develop osteoporosis less often. It has been suggested that the life-long relative deficiency in women might contribute to the development of this disease.<sup>2</sup> Strong evidence that calcitonin is important in maintaining skeletal integrity came from analysis of the calcitonin gene in a young man with severe osteoporosis; a simple mutation in the gene resulted in the absence of circulating calcitonin.<sup>9</sup>

Calcitonin deficiency may also be important in the pathogenesis of osteoporosis due to corticosteroid excess. Patients with Cushing's syndrome due to either endogenous production or exogenous administration of glucocorticoids have consistent reductions in plasma calcitonin concentrations.<sup>2</sup>

Not all the evidence supports an association between calcitonin deficiency and osteoporosis. In studies evaluating skeletal effects of calcitonin deficiency due to previous thyroidectomy or calcitonin excess due to medullary thyroid carcinoma, there was no significant correlation between bone mineral density and chronic abnormalities of plasma calcitonin.<sup>10</sup> Thus, an etiologic role for calcitonin deficiency in the production of osteoporosis must remain uncertain.

### Calcitonin and Treatment of Postmenopausal Osteoporosis

Several well-designed clinical trials have demon-

strated the efficacy of injectable<sup>11-14</sup> and, more recently, nasal calcitonin<sup>15,16</sup> in the treatment of established postmenopausal osteoporosis. Therapeutic responses during treatment periods of twelve to twenty-six months have ranged from simple suppression of bone loss to marked dose-dependent increments in bone mass of the vertebrae and long bones.

In one impressive example, osteoporotic women treated with daily injections of 100 IU of salmon calcitonin had mean twelve-month increments in bone mineral density of the spine and femur (as determined by dual photon absorptiometry (DPA)) of 8.5 percent and 2.5 percent, respectively.<sup>11</sup> In another study, women given 100 IU of injectable salmon calcitonin on alternate days for one year, had a mean increase in radial bone mass (measured by DPA) of thirteen percent. In both studies, control osteoporotic subjects had mean decreases in bone mineral density of about 4 percent. Nasal salmon calcitonin appears to be as effective as injectable salmon calcitonin, but because of the less efficient uptake, larger doses (e.g., 200 IU per day) are usually given.<sup>15-16</sup>

There are now indications as to the reason for such large increases in bone density in response to calcitonin administration. Civitelli and coworkers have demonstrated that the skeletal response to calcitonin is directly related to the rate of bone turnover.<sup>13</sup> Bone in postmenopausal patients with *high-turnover* osteoporosis contains abundant osteoblasts and osteoclasts, reflecting active bone formation and resorption. In contrast, patients with *low-turnover* osteoporosis have few of these cells.<sup>17</sup> High-turnover osteoporotics (about one-third of the total) exhibited a striking sensitivity to calcitonin, with a 22 percent increase in vertebral bone mass and stabilization of femoral bone mineral content (measured by DPA) during a twelve-month period (even with a low dose, 50 IU injectable salmon calcitonin, alternate day regimen). In contrast, patients with low-turnover osteoporosis showed no significant changes in spinal bone mineral density during the study and some, given the same low dose, even lost some femoral bone mass.<sup>13</sup> Biochemical markers, such as circulating osteocalcin (bone gla protein) or twenty-four-hour urinary hydroxyproline excretion, are elevated in high-turnover osteoporotics and, therefore, may be extremely useful biochemical markers in predicting a response to calcitonin.<sup>13</sup>

Finally, several controlled studies indicate that calcitonin (both injectable and nasal spray) is effective for the prevention of early postmenopausal bone loss.<sup>18-20</sup> In one example, injectable human calcitonin (even at the low dose of 50 IU per week, for two years) was as effective as estradiol in preventing vertebral bone loss.<sup>18</sup>

### Calcitonin and the Treatment of Steroid-induced Osteoporosis

Glucocorticoids cause a net negative calcium balance due to a decrease in gastrointestinal calcium absorption and an increase in urinary calcium excre-



tion; they also enhance bone resorption and decrease bone formation. Because of these effects, there is an approximate 30 to 50 percent prevalence of osteoporosis in patients receiving long-term glucocorticoid therapy, and many of these patients will experience fractures. There is a close direct relationship between glucocorticoid dose and the rate of bone loss, with a greater effect on trabecular bone than on cortical bone.<sup>21</sup>

In two studies of prednisone-treated patients with sarcoidosis, salmon calcitonin (injectable, 100 IU, alternate day, fifteen months)<sup>22</sup> or a mixed regimen (injectable, 100 IU, daily, four months, followed by nasal, 200 IU, daily, eight months) prevented vertebral bone loss.<sup>23</sup> In the first study, untreated control patients experienced a mean 14 percent bone loss in the fifteen-month period.<sup>22</sup> In osteoporotic patients with steroid-dependent chronic obstructive pulmonary disease, injectable salmon calcitonin (100 IU, alternate day, six months) resulted in a small increase in forearm bone mineral density.<sup>24</sup>

### Analgesic Effect of Calcitonin

There have been a number of indications that calcitonin is effective in producing analgesia in patients with bone-related pain due to conditions such as Paget's Disease, metastatic bone disease, and acute osteoporotic vertebral fractures. Surprisingly, the analgesic effects occurred *prior* to any improvement in biochemical parameters reflecting bone resorption and persisted despite the development of resistance to calcitonin.<sup>25</sup> In one placebo-controlled study of patients with pain secondary to osteolytic metastases, salmon calcitonin (100 IU, daily, injectable, fourteen days) significantly decreased pain, as measured by a visual analog scale; this effect was associated with an increase in circulating immunoreactive B-endorphins, suggesting that the analgesic effect was mediated through the endogenous opiate system.<sup>26,27</sup> In the same study, the analgesic effect of administered *human* calcitonin was negligible. In another placebo-controlled study of patients with acute vertebral compression fractures, nasal salmon calcitonin (200 IU per day, one month) produced significant pain relief (also measured by a visual analog scale) with a noticeable effect after only seven days.<sup>28</sup>

### Side Effects of Calcitonin

At therapeutic dosages, calcitonin is devoid of detectable toxicity. However, there are minor side effects which occur in 10 to 20 percent of patients treated with injectable calcitonin. The most prominent are gastrointestinal (usually nausea; less often mild abdominal discomfort and diarrhea) and vascular (flushing of the face, tingling of the hands). Some of the gastrointestinal side effects are due to inhibition of gastric acid production by salmon calcitonin and may be diminished by administering the agent four to five hours following the evening meal. Pain at the site of

injection may occur, and urinary frequency and an unpleasant metallic taste have been described in rare instances. Reactions usually occur with initiation of therapy, are milder with subcutaneous than intramuscular delivery, and tend to diminish or disappear with continued administration of the drug. Surprisingly, undesirable reactions are more pronounced with human than with salmon calcitonin.<sup>25</sup> These side effects are almost completely eliminated with nasal administration of the hormone, and there have been no adverse effects of the spray on the nasal mucosa or vasculature.<sup>16,20</sup>

### Resistance to Calcitonin

After osteoporotic patients have received calcitonin for eighteen to twenty-four months, there is a gradual decline in responsiveness to the hormone.<sup>12,25</sup> This effect has also been observed in patients with Paget's disease. The mechanism for calcitonin resistance is uncertain; hypotheses have included antibody-mediated inactivation of the hormone (although resistance is also observed with human calcitonin) and down-regulation of skeletal calcitonin receptors. It may be advisable to use intermittent therapy to ward off the resistance phenomenon. This mode of therapy has not been fully investigated. However, in one preliminary study of women with postmenopausal osteoporosis, 200 IU per day of nasal salmon calcitonin was administered only in years one and three of a three-year study period; this treatment completely prevented bone loss in the spine and forearm.<sup>15</sup>

### Guidelines for Treatment of Osteoporosis with Calcitonin

Calcitonin is a safe and effective agent for the treatment of osteoporosis. Salmon rather than human calcitonin should be used because it has fewer undesirable side effects and because of its possible analgesic effect in patients with acute fractures. It is indicated for prevention and treatment of osteoporosis in postmenopausal women who are not suitable candidates for estrogen therapy (e.g., women with a history of breast cancer or who are intolerant of estrogen). Since it has not been established whether estrogen therapy is beneficial in the geriatric population,<sup>29</sup> calcitonin is indicated in this group. Calcitonin is also beneficial for the treatment of steroid-induced osteoporosis and has been recommended for this purpose by the American College of Rheumatology.<sup>30</sup>

Calcitonin is particularly useful in patients with high-turnover osteoporosis. As described above, this has been shown in postmenopausal women, and it is also likely to be the case in other types of osteoporosis characterized by increased bone turnover such as that associated with hyperthyroidism. Patients with high-turnover osteoporosis may be identified by the finding of an elevated circulating osteocalcin or elevated twenty-four-hour urinary hydroxyproline.<sup>13</sup>



The effect on fracture rates in patients treated with calcitonin has not been investigated. However, the rate is likely to be significantly reduced; diphosphonates, which cause only a 2 to 3 percent annual increase in vertebral bone mass (less than that usually produced by calcitonin), have been found to cause a significant decrease in the incidence of vertebral fractures.<sup>31,32</sup>

A major drawback to calcitonin is its expense. The cost of administering fifty units per day is approximately \$140 per month. This treatment is covered by Medical Assistance as well as certain prescription plans. In patients with high-turnover osteoporosis, alternate day therapy is adequate and would lower the cost to \$70 per month. Intermittent therapy, which will probably be preferable to continuous therapy (because of the problem of resistance), will also reduce medication costs.

### Research Directions

There are several studies, ongoing and planned, on the effect of calcitonin on osteoporosis; Sinai Hospital of Baltimore is involved in some of these studies. As part of a multicenter national placebo-controlled study, the analgesic effect of injectable salmon calcitonin is being tested in patients with acute vertebral compression fractures. In another five-year study which began in early 1991, a number of centers in the United States will be enrolling over 1,000 patients with established osteoporosis to evaluate the long-term effects of nasal salmon calcitonin on reduction in fractures of the spine and hip. Another study is planned to begin in the near future on the effect of nasal calcitonin for prevention of steroid-induced osteoporosis. Cyclic administration of calcitonin is an important question in need of further investigation. Finally, there is a major effort to develop an oral formulation of calcitonin.

### References

1. Peck WA, Riggs BL, and Bell NH. Physicians resource manual on osteoporosis. Washington National Osteoporosis Foundation, 1987.
2. McDermott MT and Kidd GS. The role of calcitonin in the development and treatment of osteoporosis. *Endocr Rev* 1987; 8:377-90.
3. Copp DH, Cameron EC, Cheney BA, Davidson AFG and Henze KG. Evidence for calcitonin--a new hormone from the parathyroid that lowers blood calcium. *Endocrinology* 1962; 70:638-49.
4. Gennari C, Chierichetti SM, Vibelli C, Francini G, Maioli E and Gonnelli S. Acute effects of salmon, human, and porcine calcitonin on plasma calcium and cyclic AMP levels in man. *Curr Ther Res* 1981; 30:1024-32.
5. Chambers TJ, Chambers JC, Symonds J and Darby JA. The effect of human calcitonin on the cytoplasmic spreading of rat osteoclasts. *J Clin Endocrinol Metab* 1986; 63:1080-85.
6. Body JJ, Glibert F, Nejai S, Fernandez G, Van Langendonck A and Borkowski A. Calcitonin receptors on circulating normal human lymphocytes. *J Clin Endocrinol Metab* 1990; 71:675-81.
7. Bhalla AK, Amento EP, Clemens TL, Holick MF and Krane SM. Specific high-affinity receptors for 1,25-dihydroxy vitamin D<sub>3</sub> in human peripheral blood mononuclear cells: Presence in

- monocytes and induction in T lymphocytes following activation. *J Clin Endocrinol Metab* 1983; 57:1308-10.
8. Perry III, HM Chappel JC, Bellorin-Font E, Tamao J, Martin KJ and Teitelbaum SL. Parathyroid hormone receptors in circulating human mononuclear leukocytes. *J Biol Chem* 1984; 259:5531-35.
9. Alevizaki M, Stevenson JC, Girgis SI, MacIntyre I and Legon S. Altered calcitonin in a young patient with osteoporosis. *Br Med J* 1989; 298:1215-16.
10. Hurley DL, Tiegs RD, Wahner HW and Hunter III, H. Axial and appendicular bone mineral density in patients with long-term deficiency or excess of calcitonin. *N Engl J Med* 1987; 317:537-41.
11. Gennari C, Chierichetti SM, Bigazzi S, Fusi L, Gonnelli S, Ferrara R and Zacchei F. Comparative effects on bone mineral content of calcium and calcium plus salmon calcitonin given in two different regimens in postmenopausal osteoporosis. *Curr Ther Res* 1985; 38:455-64.
12. Gruber HE, Ivey JL, Baylink DJ, Matthews M, Nelp WB, Sisom K and Chesnut CH. Long-term calcitonin therapy in postmenopausal osteoporosis. *Metabolism* 1984; 33:295-303.
13. Civitelli R, Gonnelli S, Zacchei F, Bigazzi S, Vattimo A, Avioli LV and Gennari C. Bone turnover in postmenopausal osteoporosis: Effect of calcitonin treatment. *J Clin Invest* 1988; 82:1268-74.
14. Mazzuoli GF, Passeri M, Gennari C, Minisola S, Antonelli R, Valtorta C, Palummeri E, Cervellin GF, Gonnelli S and Francini G. Effects of salmon calcitonin in postmenopausal osteoporosis: A controlled double-blind clinical study. *Calcif Tissue Int* 1986; 38:3-8.
15. Overgaard K, Hansen MA, Nielsen V-AH, Riis BJ and Christiansen C. Discontinuous calcitonin treatment of established osteoporosis--effects of withdrawal of treatment. *Am J Med* 1990; 89:1-6.
16. Overgaard K, Riis BJ, Christiansen C, Podenphant J and Johansen JS. Nasal calcitonin for treatment of established osteoporosis. *Clin Endocrinol* 1989; 30:435-42.
17. Whyte M, Bergfeld MA, Murphy WA, Avioli LV and Teitelbaum SL. Postmenopausal osteoporosis: A heterogeneous disorder as assessed by histomorphometric analysis of iliac crest bone from untreated patients. *Am J Med* 1982; 72:193-202.
18. MacIntyre I, Whitehead MI, Banks LM, Stevenson JC, Wimalawansa SJ and Healy MJR. Calcitonin for prevention of postmenopausal bone loss. *Lancet* 1988; ii:900-02.
19. Reginster JY, Albert A, Lecart MP, Lambelin P, Denis D, Deroisy R, Fontaine MA and Franchimont P. One year controlled randomised trial of prevention of early postmenopausal bone loss by intranasal calcitonin. *Lancet* 1987; ii:1481-83.
20. Overgaard K, Riis BJ, Christiansen C and Hansen MA. Effect of salcatonin given intranasally on early postmenopausal bone loss. *Br Med J* 1989; 299:477-9.
21. Lukert BP and Raisz LG. Glucocorticoid-induced osteoporosis: pathogenesis and management. *Ann Intern Med* 1990; 112:352-64.
22. Rizzato G, Tosi G, Schiraldi G, Montemurro L, Zanni D and Sisti S. Bone protection with salmon calcitonin in the long-term steroid therapy of chronic sarcoidosis. *Sarcoidosis* 1988; 5:99-103.
23. Rizzato G, Schiraldi G, Tosi G, Locicero S, Montemurro L, Zanni D and Sisti S. Administration of salmon calcitonin nasal spray for long-term treatment of corticosteroid-induced osteoporosis. A preliminary report. *Curr Ther Res* 1989; 45:761-6.
24. Ringe JD and Welzel D. Salmon calcitonin in the therapy of corticoid-induced osteoporosis. *Eur J Clin Pharmacol* 1987; 33:35-9.
25. Genarri C and Avioli LV. Calcitonin therapy in osteoporosis. In: Avioli L, ed. *The Osteoporotic Syndrome*. London: Grune & Stratton, Inc., 1990: 121-42.
26. Gennari C, Chierichetti SM, Piolini M, Vibelli C, Agnusdei D, Civitelli R and Gonnelli S. Analgesic activity of salmon and human calcitonin against cancer pain: A double-blind placebo-controlled clinical study. *Curr Ther Res* 1985; 38:298-308.
27. Oberman Z, Graf E, Hoerer E, Chayen R and Laurian L. ACTH, cortisol, and endorphin increase produced by calcitonin administration. *Israel J Med Sci* 1985; 21:43-4. (Abstract)
28. Pun KK and Chan LWL. Analgesic effect of intranasal salmon calcitonin in the treatment of osteoporotic vertebral fractures. *Clin Ther* 1989; 2:205-9.
29. Barzel US. Estrogens in the prevention and treatment of postmenopausal osteoporosis: A review. *Am J Med* 1988; 85:847-50.



30. Eufemio MA. Advances in the therapy of osteoporosis: Steroid-induced osteoporosis. *Geriatric Medicine Today* 1990; 9:41-56.

31. Watts NB, Harris ST, Genant HK, Wasnich RD, Miller PD, Jackson RD, Licata AA, Ross, P, Woodson GC, Yanover MJ, Mysiw WJ, Kohse L, Rao MB, Steiger P, Richmond B and Chestnut CH. Intermittent cyclical etidronate treatment of postmenopausal osteoporosis. *N Engl J Med* 1990; 323:73-9.

32. Storm T, Thamsborg G, Steiniche T, Genant HK and Sorensen OH. Effect of intermittent cyclical etidronate therapy on bone mass and fracture rate in women with postmenopausal osteoporosis. *N Engl J Med* 1990; 322:1265-71.

## Hotline Numbers for Impaired Professionals

Physicians -- 727-0120

Dentists -- 964-2275

Attorneys -- 685-7878

Pharmacists -- 727-0746

Emergency Psychiatric Beds  
800-492-0610

INTERIOR DESIGN • SPACE PLANNING •  
FURNITURE & CABINETRY SELECTION • CUSTOM  
CABINETRY • SURGI-CENTERS • SURGERY &  
AMBULATORY CARE FACILITIES • MEDICAL &  
DENTAL OFFICES • LABORATORIES • MEDICAL  
OFFICE BUILDINGS • CONSTRUCTION  
ADMINISTRATION • COST ESTIMATING



**LEVIN/BROWN & ASSOCIATES**  
ARCHITECTS/INTERIOR DESIGNERS

17 Warren Road  
Suite 7B  
Baltimore, MD 21208  
(301) 486-9006

"THE BEST CARE ANYWHERE"

## Advanced-Care AMBULANCE



**665-0550**

RADIO DISPATCHED

CLEAN MODERN VEHICLES

24 HOURS A DAY - 7 DAYS A WEEK

FULLY LICENSED EMERGENCY MEDICAL TECHNICIANS

LOCAL AND LONG DISTANCE TRANSPORTS

WE BILL MAJOR INSURANCE COMPANIES

MEDICARE AND MEDICAID APPROVED

LOCATED IN THE  
MITCHIERLING BUILDING • 9413 HARFORD RD.

## PHYSICIANS

Do something different  
two days a month

Receive a commission  
in the Army National Guard

*The Army National Guard has immediate openings for physicians which require participation of only 2 days a month plus a 15-day Annual Training Period (a total of 39 days per year).*

### YOU WILL BE ELIGIBLE

- A COMMISSION IN THE ARMY NATIONAL GUARD
- AN EXCELLENT PART-TIME INCOME
- PAID ATTENDANCE AT:
  - CONTINUING MEDICAL EDUCATION COURSES
  - AMA CONFERENCES
  - KPUP (Active duty assignment up to 30 days in Europe, Asia and South America)
  - TRAINING AT U.S. ARMY HOSPITALS
- POST EXCHANGE & COMMISSARY
- MILITARY AIR TRAVEL WITHIN THE 50 STATES

MARYLAND ARMY NATIONAL GUARD

PHIL HOWARD  
(301) 653-4618

610 Reisterstown Road, Pikeville, MD 21208



# DIAGNOSTIC ASSAY SERVICES



## **Specialties include:**

*Fertility Testing*

*Esoteric Steroid & Endocrine Testing*

*Infectious Disease Testing*

*Complete Allergy Testing*

**9290 Gaither Road  
Gaithersburg, MD 20877**

**D.C. Area 840-9220  
Toll Free - Nationwide - 800-638-4000**



---

# The Efficacy of Amiodarone in the Treatment of Refractory Nonsustained Ventricular Tachycardia

---

Steven L. Ballas MD and Enrico P. Veltri MD

---

*Dr. Ballas completed his Internal Medicine Residency at Sinai Hospital of Baltimore and is now in private practice in Youngstown, OH. Dr. Veltri is Director, Division of Cardiology, Department of Medicine, Sinai Hospital of Baltimore, Baltimore, MD. Reprints: Enrico P. Veltri MD, Division of Cardiology, Sinai Hospital of Baltimore, Belvedere at Greenspring Ave., Baltimore, MD 21215.*

---

*Amiodarone is very effective in suppressing refractory nonsustained ventricular tachycardia. Efficacy can be assessed after one week of therapy with continued long-term response in the vast majority of patients.*

---

Amiodarone is a benzofuran derivative structurally similar to thyroxine which was originally introduced in Europe as an antian-ginal agent.<sup>1</sup> It was subsequently found to have potent antiar-rhythmic potential<sup>2,3</sup> and has undergone extensive clinical investigation in the United States as an antiarrhythmic agent leading to its approval by the Food and Drug Administration for use in life-threatening ventricular arrhythmias.<sup>4-10</sup> Although its electrophysiologic effects on impulse generation and conduction have been well-investigated,<sup>11,12</sup> the determination of its efficacy in ventricular tachyarrhythmias as assessed by programmed electrical stimulation is controversial.<sup>13-17</sup> We have previously reported the results and utility of serial Holter monitoring in the evaluation of patients with clinical sustained ventricular tachycardia treated with amiodarone.<sup>18-19</sup> However, the use of amiodarone and long-term follow-up in patients with refractory nonsustained ventricular tachycardia has not been reported. This study was designed to determine the efficacy of amiodarone in this group of patients.

## Methods

**Patient Population.** Thirty-five patients with documented non-sustained ventricular tachycardia ( $\geq$  three beats,  $<$  thirty second duration, rate  $>$  100 beats per minute (bpm)) but without a history of sustained ventricular tachyarrhythmia ( $>$  thirty seconds) or sudden cardiac death (cardiac arrest within one hour of symptoms requiring cardiopulmonary resuscitation or cardioversion, or both, from ventricular tachycardia or fibrillation) were referred to the Clinical Arrhythmia Service and subsequently treated with amiodarone. The clinical characteristics of patients are summarized in Table 1.

Underlying cardiac disease was defined by cardiac catheteriza-tion, echocardiography, and radionuclide studies. Coronary artery disease (defined by 70 percent coronary artery narrowing) was present in twenty patients (57 percent), nonischemic dilated con-

gestive cardiomyopathy (defined by diffuse left ventricular hypokinesis with ejection fraction < 50 percent) in twelve patients (34 percent), hypertrophic cardiomyopathy in one patient (3 percent), mitral valve prolapse in one patient (3 percent), and no structural heart disease in one patient (3 percent). Ejection fraction was  $36 \pm 3$  percent (mean  $\pm$  standard deviation).

The clinical presentation of ventricular tachycardia was asymptomatic (other than palpitations) in twenty-two patients, presyncope (lightheadedness accompanying the arrhythmia) in eleven patients, and syncope (transient loss of consciousness with spontaneous recovery without documented sustained arrhythmia) in two patients.

Twenty-six patients (74 percent) underwent electrophysiologic testing following discontinuation of all antiarrhythmic drugs (other than digoxin or beta-adrenergic blockers) for at least five half-lives. Twenty-one patients had inducible ventricular tachycardia (sustained ventricular tachycardia in thirteen, nonsustained ventricular tachycardia in eight) using a programmed electrical stimulation protocol previously described.<sup>14</sup>

**Previous Drug Failure.** Previous drug failure was defined as continued ventricular tachycardia ( $\geq$  three beats, rate > 100 bpm) on Holter monitoring after forty-eight hours of drug therapy at therapeutic blood levels, or intolerable side effects. Patients had failed  $3.1 \pm 1.3$  drugs; drug failures are summarized in Table 2. No patient had previously been treated with amiodarone.

**Table 1. Clinical Characteristics of Patients**

Total Patients	35
Male	28
Female	7
Age (years)	$61 \pm 3^*$
Ejection Fraction (%)	$36 \pm 3^*$
Cardiac Disease	
Coronary Artery Disease	20
Congestive Cardiomyopathy	12
Hypertrophic Cardiomyopathy	1
Mitral Valve Prolapse	1
No Structural Heart Disease	1
Clinical Presentation	
Asymptomatic (palpitations)	22
Presyncope	11
Syncope	2
Previous Drug Failure	$3.1 \pm 1.3^*$
Follow-up (Months)	$12 \pm 2^*$

\* Mean  $\pm$  standard deviation

**Table 2. Previous Drugs Failed**

Quinidine	31
Procainamide	29
Disopyramide	13
Tocainide	7
Aprindine	4
Propafenone	4
Mexiletine	4
Flecainide	2
Bretylium	1
Phenytoin	1

**Baseline Data.** Following discontinuation of all antiarrhythmic drugs (except digoxin and beta-adrenergic blockers) for at least five half-lives, all patients had nonsustained ventricular tachycardia documented on single baseline twenty-four-hour Holter monitoring prior to beginning amiodarone therapy. Baseline evaluation also included a 12-lead electrocardiogram; a complete blood count; a serum chemistry profile including liver function tests, thyroid function tests and pulmonary function studies including diffusion capacity; and an ophthalmologic evaluation including slit-lamp examination. Patients receiving anticoagulant agents or digoxin had coagulation profiles or digoxin levels obtained with appropriate dose adjustments.

**Amiodarone Administration.** The oral loading of amiodarone was 1200 mg/day for fourteen days followed by a maintenance dose of 400 mg/day. Amiodarone was the only antiarrhythmic agent used on a long-term basis; any concomitant antiarrhythmic drugs other than digoxin or beta-adrenergic blockers were discontinued two to five days after amiodarone therapy was begun. Dosage reduction to 200-300 mg/day was instituted in those patients who developed intolerable side effects.

**Holter Monitoring.** Holter monitoring (Avionics Model 445B) was performed using dual-channel recordings. Magnetic tapes were analyzed using a Del-Mar Avionics Model 660 Dynamic Electrocardio Scanner. All tapes were analyzed by both investigators and ventricular tachycardia was defined as three or more repetitive ventricular beats at a rate greater than 100 per minute. The incidence of ventricular couplets and the frequency of single premature ventricular complexes were also quantified. Random tapes analyzed independently using a Dynamic Electrocardiovalidator<sup>R</sup> Model 686 (Del-Mar Avionics, Irvine, CA) revealed a 95 percent accuracy of our technician's scan.

All patients had baseline twenty-four-hour Holter monitoring, seventy-two-hour Holter monitoring prior to hospital discharge during the second week of amiodarone therapy (days eight through ten), and serial twenty-four-hour Holter monitoring on selected follow-up intervals.

**Follow-up.** Patients were followed in the outpatient clinic of the Sudden Death Prevention Program at two, three, six and twelve months after hospital discharge, and then every six months thereafter. At each visit, repeat baseline studies, including twenty-four-hour Holter monitoring, were performed and a history of interim symptomatic events (sudden cardiac death, syncope, or presyncope) or any adverse side effects was recorded.

**Amiodarone Efficacy.** The antiarrhythmic efficacy of amiodarone was based on total suppression of nonsustained ventricular tachycardia on serial Holter monitoring. The clinical efficacy of amiodarone was based on the absence of clinical arrhythmic events (sudden cardiac death, sustained ventricular tachycardia) through follow-up. Adequate antiarrhythmic response in regard to premature ventricular complex



and couplet suppression was 83 percent and 90 percent suppression from baseline, respectively.<sup>20,21</sup>

**Statistical Analysis.** The data are presented as mean  $\pm$  standard deviation. The significance of the differences between two groups was determined by the Student's t-test for paired or unpaired data or by the chi-square or Fisher Exact test, where appropriate.  $P = 0.05$  was accepted as the limit of significance.

## Results

**Clinical Outcome.** At twelve  $\pm$  two months follow-up (range one to fifty-two), three patients (9 percent) had died. All three deaths were cardiac (two sudden, one acute myocardial infarction). One additional patient had sustained ventricular tachycardia manifesting as syncope. Thirty-two patients (92 percent) were free of clinical arrhythmic events through follow-up.

**Holter Monitoring Outcome.** Results of baseline and serial Holter monitoring on therapy (days eight through ten, and months two, three, six and twelve) are summarized in Table 3.

During the seventy-two hours of Holter monitoring after the first week of amiodarone therapy (days eight through ten), single premature ventricular complexes decreased from  $7109 \pm 1480$  per twenty-four hours to  $2172 \pm 292$  per twenty-four hours,  $P = .006$ . Ventricular couplets were similarly suppressed from  $1108 \pm 461$  per twenty-four hours to  $25 \pm 8$  per twenty-four hours,  $P = .002$ . Premature ventricular complex and couplet suppression in individual patients was  $86 \pm 1$  percent and  $95 \pm 1$  percent, respectively. Nineteen patients (54 percent) had greater than 83 percent single premature ventricular complex suppression. A significant suppression of single premature complexes in the total population continued throughout the course of follow-up. Of note, premature ventricular complex suppression remained greater than 83 percent through follow-up in eleven of nineteen patients. Ventricular couplet suppression remained greater than 90 percent through follow-up in twenty-two of twenty-six patients.

Twenty-three patients (66 percent) had ventricular tachycardia totally suppressed on seventy-two-hour Holter monitoring after the first week of therapy. Ventricular tachycardia was present on twenty-four-hour Holter Monitoring in seven patients (26 percent) at two months, six patients (26 percent) at three

months, two patients (11 percent) at six months, and one patient (10 percent) at twelve months.

**Side Effects.** Side effects other than corneal microdeposits (hepatic, pulmonary, thyroid, neurologic, and cardiac conduction) were noted in eleven patients (31 percent). Dosage reduction was required in seven patients (20 percent) and eventual discontinuation of the drug in one patient (3 percent).

## Discussion

This study reveals that amiodarone is effective in the treatment of refractory, nonsustained ventricular tachycardia as assessed by serial Holter monitoring. Antiarrhythmic efficacy, as defined by total suppression of spontaneous nonsustained ventricular tachycardia, was found in 66 percent of patients at the second week of therapy with long-term efficacy in 74 to 90 percent of patients through a mean one-year follow-up. This extent of antiarrhythmic efficacy in this patient population concurs with our previously reported findings in patients with refractory sustained ventricular tachycardia treated with amiodarone.<sup>18,19</sup> Compared with total suppression of nonsustained ventricular tachycardia however, there was a somewhat lesser degree of concomitant premature ventricular complex suppression long-term (58 percent of patients had greater than 83 percent suppression throughout the study). There was, however, a somewhat higher degree of concomitant ventricular couplet suppression (85 percent of patients had greater than 90 percent suppression throughout the study, comparable to ventricular tachycardia suppression).

Eighty-three percent suppression of premature ventricular complexes, 90 percent suppression of ventricular couplets, and total abolition of nonsustained ventricular tachycardia from baseline ectopy on follow-up twenty-four-hour Holter monitors has been shown to significantly distinguish therapeutic responsiveness from spontaneous variability of ventricular arrhythmias and has been an accepted endpoint in most studies.<sup>20,21</sup> Notwithstanding, our patient population had a high density of baseline simple and complex ectopy (a mean of 7,000 simple premature complexes and 1,100 couplets per twenty-four-hours), thus the degree and persistence of antiarrhythmic efficacy is impressive. This efficacy was demonstrable despite a significant decrease in the maintenance dose from a mean 400 mg/day at two months to approximately 300 mg/day at twelve-month follow-up.

The 92 percent arrhythmia-free incidence within our patient population must be taken into perspective. Although our patients were felt to be at high risk for sustained ventricular tachyarrhythmias (underlying ischemic or congestive heart disease, moderate left ventricular dysfunction, and a high proportion of inducible ventricular

**Table 3. Findings of Serial Holter Monitoring**

	Baseline	Days 8-10	2 Mos	3 Mos	6 Mos	12 Mos
Number of Patients	35	35	27	23	19	10
Amiodarone Dose (mg/day)	--	1200	400	$360 \pm 17^*$	$338 \pm 22^*$	$300 \pm 46^*$
% PVC Suppression	--	$86 \pm 1^*$	$87 \pm 3^*$	$87 \pm 5^*$	$87 \pm 6^*$	$88 \pm 7^*$
% Couplet Suppression	--	$95 \pm 1^*$	$93 \pm 3$	$96 \pm 2^*$	$90 \pm 5^*$	$97 \pm 2^*$
Number of Patients with VT (%)	35(100)	12(34)	7(26)	6(26)	2(11)	1(10)

PVC = premature ventricular complex

VT = ventricular tachycardia

\* Mean  $\pm$  standard deviation



tachyarrhythmia at baseline programmed electrical stimulation), all patients were treated and no placebo-control group is available. Similarly, uncontrolled studies of patients with underlying heart disease and nonsustained ventricular tachycardia treated with empiric, Holter-guided, or electrophysiologic-guided antiarrhythmic therapy have shown a 5 to 17 percent yearly incidence of sudden cardiac death.<sup>22-24</sup> Further large scale trials using randomized, placebo-controlled study designs will be necessary to address the impact of specific antiarrhythmic drug therapy on sudden cardiac death in high-risk patients.

**Limitations of Study.** Our results are for a small, select patient population referred to a tertiary arrhythmia center for refractory, potentially life-threatening, ventricular arrhythmias. Thus, this population may represent a special subset of patients with nonsustained ventricular tachycardia.

### Summary

The antiarrhythmic efficacy of amiodarone in suppressing complex ventricular arrhythmias in a drug-resistant high-risk population has been demonstrated. Further studies to assess the clinical efficacy of amiodarone are warranted.

### References

1. Vastesaeger M, Gillot P, Rassin G. Etude clinique d'une nouvelle medication antiangoreuse. *Acta Cardiol* 1967; 22:483-500.
2. Charlier R, Delaunoy G, Bauthier J et al. Recherches dans la serie des benofurannes: XL. Proprietes antiarrhythmiques de amiodarone. *Cardiologia* 1969; 54:82-90.
3. Singh BN, Vaughan Williams EM. The effect of amiodarone, a new antianginal drug, on cardiac muscle. *Br J Pharmacol* 1970; 39:657-67.
4. Podrid PJ, Lown B. Amiodarone therapy in symptomatic, sustained refractory atrial and ventricular tachyarrhythmias. *Am Heart J* 1981; 101:374-9.
5. Heger JJ, Prystowsky EN, Jackman WM et al. Amiodarone: Clinical efficacy and electrophysiology during long-term therapy for recurrent ventricular tachycardia or ventricular fibrillation. *N Engl J Med* 1981; 305:539-44.
6. Waxman HL, Groh WC, Marchlinski FE et al. Amiodarone for control of sustained ventricular tachyarrhythmias: Clinical and electrophysiologic effects in 51 patients. *Am J Cardiol* 1982; 50:1066-74.
7. Nademanee K, Singh BN, Hendrickson J et al. Amiodarone in refractory life-threatening ventricular arrhythmias. *Ann Intern Med* 1983; 98:577-84.
8. Morady F, Sauve MJ, Malone P et al. Long-term efficacy and toxicity of high-dose amiodarone therapy for ventricular tachycardia or ventricular fibrillation. *Am J Cardiol* 1983; 52:975-9.
9. Fogoros RN, Anderson KP, Winkle RA, Swerdlow CD, Mason JW. Amiodarone: Clinical efficacy and toxicity in 96 patients with recurrent, drug-refractory arrhythmias. *Circulation* 1983; 68:88-94.
10. Greene HL, Graham EL, Werner JA et al. Toxic and therapeutic effects of amiodarone in the treatment of cardiac arrhythmias. *J Am Coll Cardiol* 1983; 2:1114-28.
11. Hamer AWF, Mandel WJ, Zaher CA et al. The electrophysiologic basis of the use of amiodarone for treatment of cardiac arrhythmias. *PACE* 1983; 6:784-94.
12. Veltri EP, Reid PR. Amiodarone: A review of its electrophysiologic effects on the impulse generation and conduction system of the heart. *Cardiovascular Reviews and Reports* 1985; 6:1104-15.
13. Hamer AW, Finerman WB, Peter T et al. Disparity between the clinical and electrophysiologic effects of amiodarone in the treatment of recurrent ventricular tachyarrhythmias. *Am Heart J* 1981; 102:992-1000.
14. Veltri EP, Reid PR, Platia EV et al. Results of late programmed electrical stimulation and long-term electrophysiologic effects of amiodarone in patients with refractory ventricular tachycardia. *Am J Cardiol* 1985; 55:375-9.
15. Saksena S, Rothbart ST, Cappello G. Chronic effects of amiodarone in patients with refractory ventricular tachycardia. *Int J Cardiol* 1983; 3:339-52.
16. Horowitz LN, Greenspan AM, Speilman SR et al. Usefulness of electrophysiologic testing in evaluation of amiodarone therapy for sustained ventricular tachyarrhythmias associated with coronary artery disease. *Am J Cardiol* 1985; 55:367-71.
17. Veltri EP. Programmed electrical stimulation in predicting clinical efficacy of amiodarone in ventricular tachyarrhythmias. *Clin Prog in Pacing and Electrophysiology* 1986; 4:442-8.
18. Veltri EP, Reid PR, Platis EV, Griffith LSC. Amiodarone in the treatment of life-threatening ventricular tachycardia: Role of Holter monitoring in predicting long-term clinical efficacy. *J Am Coll Cardiol* 1985; 6:806-13.
19. Veltri EP, Griffith LSC, Platia EV, Guarnieri T, Reid PR. The use of Holter (ambulatory) monitoring in the prognostic evaluation of tachycardia treated with amiodarone. *Circulation* 1986; 74:1054-60.
20. Michelson EL, Morganroth J. Spontaneous variability of complex ventricular arrhythmias detected by long-term electrocardiography recordings. *Circulation* 1980; 61:690-5.
21. Graboyes TB, Lown B, Podrid P, DeSilva R. Long-term survival of patients with malignant ventricular arrhythmias treated with antiarrhythmic drugs. *Am J Cardiol* 1982; 50:437-43.
22. Buxton AE, Marchlinski FE, Waxman HL et al. Prognostic factors in nonsustained ventricular tachycardia. *Am J Cardiol* 1984; 53:1275-79.
23. Follansbee WP, Michelson EL, Morganroth J. Nonsustained ventricular tachycardia in ambulatory patients: Characteristics and association with sudden cardiac death. *Ann Intern Med* 1980; 92:741-7.
24. Veltri EP, Platia EV, Griffith LSC et al. Programmed electrical stimulation in asymptomatic, nonsustained ventricular tachycardia. *Am J Cardiol* 1985; 56:309-14.

### Acknowledgment

We are grateful to Ms. Linda Schenker for assistance in the preparation of this manuscript. ■

### Maryland Advertisers

To advertise in *MMJ* call:  
Network Publications  
301-235-0500

## We Build Beautiful Sunlit Home Additions



Sunspace Design  
Studio, Inc.

(301) 882-6200

MHIC 16069



---

# Augmentation Rhinoplasty Utilizing Cranial Bone Grafts

---

Ira D. Papel MD

---

*Dr. Papel is an Assistant Professor and the Director of Facial Plastic and Reconstructive Surgery in the Department of Otolaryngology-Head and Neck Surgery, The Johns Hopkins Medical Institutions, and Sinai Hospital of Baltimore. Reprints: Ira Papel MD, Suite 310, 21 Crossroads Drive, Owings Mills, MD 21117.*

---

*The cranial bone graft has proven to be a safe and effective augmentation procedure for use in reconstructive rhinoplasty.*

---

Autogenous bone grafts have been used in nasal reconstruction since at least 1889<sup>1</sup> with the use of tibial grafts. The first descriptions of calvarial bone used in facial augmentation were by Muller<sup>2</sup> and Konig<sup>3</sup> in 1890. These authors reported the use of osteocutaneous flaps. Cranial grafting materials have been harvested as chips, strips, dust, and plates.

Santoni-Rugiu<sup>4</sup> reported the use of outer table grafts with maintenance of a periosteal attachment in cranial reconstruction. Tessier<sup>5</sup> recommended harvesting full thickness cranial grafts, then splitting the graft into outer and inner table components. The donor site was then reconstructed with part of the original graft material. Tessier used free calvarial bone grafts for multiple types of facial and cranial reconstruction. Clinical experience has now proven the efficacy of cranial bone in facial grafting. Powell and Riley<sup>6</sup> reported the use of outer table, free cranial bone grafts in multiple facial locations in 1987. The outer table technique differs from Tessier's description in that the inner table of the skull is left intact.

As early as 1952, Peer<sup>7</sup> observed that membranous bone from the facial area seemed to maintain its original size and shape much longer than endochondral bone from the ilium, rib, or tibia. The first comparative study to confirm this observation was reported by Smith and Abramson<sup>8</sup> in 1974. These investigators found that cranial grafts in rabbits maintained their size, structure, and calcium content while the iliac bone lost at least 75 percent of its volume in one year. These findings were confirmed in both rabbits and monkeys by Zins and Whitaker<sup>9</sup> in 1983. The biologic factors associated with these observations are not well-known. Kuziak et al<sup>10</sup> speculated that the results may relate to earlier revascularization of membranous bone. Others have speculated on the inherent architectural differences between membranous and endochondral bone, especially with regard to stress as a necessity for maintaining architecture<sup>11</sup> in endochondral bone.

## Indications

The indications for cranial bone augmentation in reconstructive

rhinoplasty include any situation requiring augmentation beyond the scope of available autologous cartilage.

Small defects which can be repaired by available autologous septal or conchal grafts are not considered for cranial grafting.

Saddle nose deformities requiring more than 2.5 mm of augmentation over the length of the nasal dorsum are ideal candidates for cranial bone grafts. Patients with previous skull fractures or craniotomies are not considered for elective cranial grafts.

In this series of twelve reconstructive rhinoplasties, eight patients had nasal deformities secondary to trauma, three from overaggressive rhinoplasties, and one from a congenital lack of nasal dorsal height (Table). Most patients received preoperative cephalometric soft tissue analysis by computer imaging (Figure 1). Follow-up in this series ranges from three to thirty-six months, with a mean of sixteen months.

### Surgical Technique

All cranial grafting procedures to date have been performed under general endotracheal tube anesthesia. The cranial exposure has been provided by limited incisions over the graft donor site, or a coronal incision if multiple grafts are anticipated. No hair is shaved in any case. The most common donor site has been the parietal region. This area has the flattest contour on the cranium and is, therefore, most conducive to nasal grafting. Coronal and sagittal sutures should be avoided in harvesting bone grafts. The sutures will provide an unstable graft, and the dural sinus beneath may cause unnecessary blood loss. The incision is carried through the pericranium, and wide elevation over the bony cranium is accomplished with a periosteal elevator.

After the site is chosen and exposure obtained, the proposed graft outlines are drawn on the cranium using a bone marking pencil. The outer cranial bone is then removed around the proposed graft with a large cutting burr. The drilling is carried down into the diploic layer and the outer edges are beveled to provide a lesser contour defect (Figure 2). A 4 mm cutting burr on an otologic style drill is commonly used. Copious irrigation is employed to prevent overheating and devitalization of the bone. The extensive beveling also allows for placement of a right angle microsagittal saw to undercut the bony outer cranium in the soft diploic layer (Figure 3). Single or multiple grafts can be

excised in this manner. In elderly patients, the diploic layer may not be as well-formed, and the depth of drilling should be carefully monitored to prevent



Figure 1. Preoperative facial analysis via computer imaging.

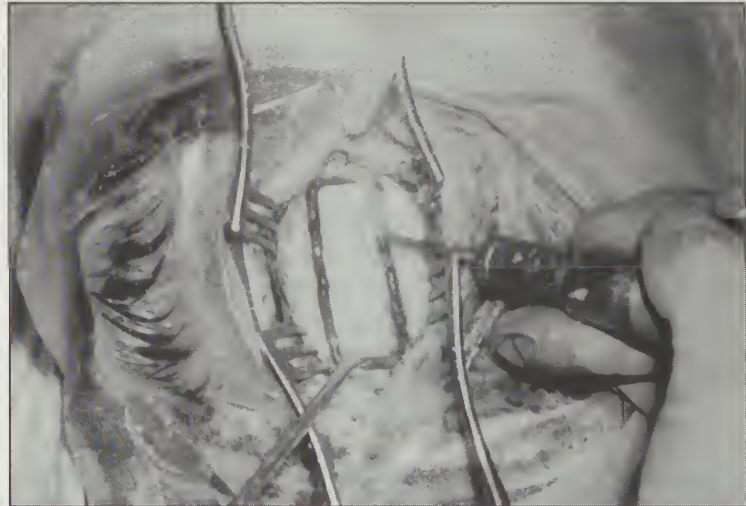


Figure 2. Preparation of graft site using cutting burr.



Figure 3. Undercutting bone graft with microsagittal saw.

**Table. Indications for Cranial Bone Graft Reconstructive Rhinoplasty**

Traumatic Nasal Deformities	8
Post-rhinoplasty Saddle Nose	3
Congenital Saddle Nose	1



cranial entry. The graft is usually easily removed, and a light layer of bone wax is applied to the exposed diploic layer. This is usually adequate for hemostasis. The periosteum is then closed over the donor site, and the scalp is closed with staples. Drains are not routinely used.

The cutting burr is used to shape the graft as necessary (Figure 4). Any remaining diploic bone is removed from the deep surface of the graft. Most nasal implants are gently tapered and thinned at the ends for contour effects. Layered grafts can be secured by intergraft wiring (Figure 5). Each layer of cranial graft will provide approximately 3.0 mm of augmentation. The graft is then placed into the nose by an incision as indicated by the specific patient's problems. An effort is made to avoid extensive undermining and to create a pocket which is midline and only slightly larger than the bone graft. I prefer entry via a marginal incision to place the graft at the greatest distance from the incision. Two patients in this series underwent open

rhinoplasty due to significant nasal tip deformities. Stay sutures are placed at the inferior and superior ends of the graft and tied externally over a bolster for fixation. Most patients also received a columellar strut for tip support using either cranial bone or septal cartilage (Figure 6). These stay sutures and a tape splint are left in place for one week. Prophylactic intravenous cefazolin is given at the beginning of surgery. Postoperative oral antistaphylococcal antibiotics are prescribed for one week.

All dressings and scalp staples are removed at one week. The patient is instructed to use nasal saline spray for one month, and lateral nasal compression exercises are demonstrated (Figures 7-10).

## Results

In this series, twelve patients received cranial bone grafts for reconstructive rhinoplasty. All surgery was performed under general anesthesia and all patients were discharged on the first postoperative day.

Complications related to the donor site were limited to one wound infection and one case of persistent pruritus in the incision line. There were no cases of dural injury or cerebrospinal fluid leak. The wound infection occurred in the first patient of the series and was attributed to the use of excess bone wax. No patient complained of significant donor site pain, hair loss, or disfigurement.



Figure 4. The bone graft is contoured as necessary.

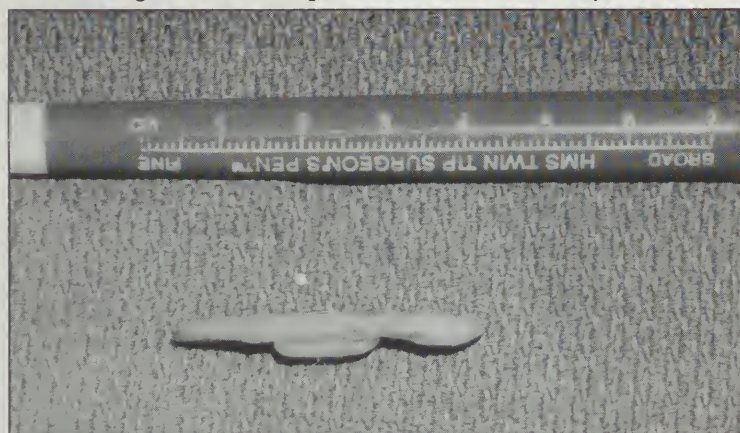


Figure 5. Layered grafts can be secured by intergraft wires.



Figure 6. Radiograph demonstrating bone grafts in place.



**Figure 7.** Patient #1: Preoperative Lateral View



**Figure 8.** Patient #1: Postoperative Lateral View

The recipient site complications have been limited to displacement of the bone graft from the midline in three patients. There have been no cases of wound infection in the nose, or extrusion of the cranial implants. One implant has been surgically repositioned. None has been removed. Patient acceptance has been good. No patients have complained of a foreign body sensation at the graft site.

### Discussion

The ideal augmentation material for reconstructive rhinoplasty would be available in plentiful supply and cause no donor site morbidity. It would also have low potential for infection or extrusion in the event of trauma. This material should also be easy to contour to specific patient needs. At this time, we do not have the ideal implant at hand. Therefore, alternative solutions must be sought.

Surgeons have utilized many materials for reconstruction of saddle nose deformities. Synthetic materials ranging from paraffin to Silastic have been used extensively, and often with good long-term success. The danger of infection or extrusion is always present if the patient suffers trauma. Homograft materials such as irradiated cartilage and demineralized bone have enjoyed recent popularity due to ease

of use and availability. Nevertheless, patient acceptance of homografts in the Acquired Immune Deficiency Syndrome (AIDS) environment is low, in spite of proven safety. Further, there has been some experimental evidence that irradiated cartilage may undergo significant resorption over time.<sup>12</sup> Autologous materials, therefore, have become much more popular among patients and surgeons.

Traditional autologous bone grafts have included rib, iliac crest, and tibia. All of these sites are endochondral bone which has been shown to have significant resorption compared with membranous bone. Donor site morbidity is also significant and there may be pain or discomfort for many weeks after harvesting. The possibility of multiple grafts from the same site does not exist. Donor site deformity and scarring is significant for the rib and tibial grafts. Cranial bone grafts have been shown to cause only minor discomfort and minimal deformity, and multiple grafts can be harvested at one time or in future procedures.

These characteristics of membranous cranial bone grafts make them excellent material for reconstructive rhinoplasty. The only complications in this series were a minor wound infection and some displacement of the grafts. These problems have been remedied by the minimal use of bone wax and transcutaneous stay sutures at both ends of the graft placed during surgery.





Figure 9. Patient #2: Preoperative Lateral View



Figure 10. Patient #2: Postoperative Lateral View

In summary, the cranial bone graft has proven to be a safe and effective augmentation procedure for use in reconstructive rhinoplasty. The major problem with proposing this to patients has been the severe sound of the procedure, as the word *cranial* brings connotations of neurosurgery to the patient's mind. Once this barrier is crossed, patient acceptance has been good, and morbidity much lower than with other autologous bone grafts.

### References

1. Seydel E. Eine neue methode, gross knochendefekten des schadels zue decken. Zentralbl Chir 1889; 16:209.
2. Muller W. Zur frage der temporaren schadelresektion an stelle der trepanation. Zentralbl Chir 1890; 17:65.
3. Konig F. Der knocherne eresatz grosser schadeldefecte. Zentralbl Chir 1890; 17:467.
4. Santoni-Rugiu P. Repair of skull defects by outer table osteoperiosteal free grafts. Plast Reconstr Surg 1969; 43:157.
5. Tessier P. Autogenous bone grafts taken from the calvarium for facial and cranial applications. Clin Plast Surg 1982; 9:531.
6. Powell N, Riley R. Cranial bone grafting in facial aesthetic and reconstructive contouring. Otolaryngol Head Neck Surg 1987; 113:713.
7. Peer LA. The fate of autogenous bone grafts. Br J Plast Surg 1952; 4:231.
8. Smith JD, Abramson M. Membranous vs endochondral bone autografts. Arch Otolaryngol 1974; 99:203.
9. Zins JE, Whitaker LA. Membranous versus endochondral

bone: Implications for craniofacial reconstruction. Plast Reconstr Surg 1983; 72:778.

10. Kuziak JF, Zins JE, Ring E, Whitaker LA. The early revascularization of membranous bone grafts. Surg Forum 1981; 32:567.

11. Albrektsson T. Repair of bone grafts. Scand J Plast Reconstr Surg 1980; 14:1.

12. Welling DB, Maves MD, Schuller DE, Bardach J. Irradiated homologous cartilage grafts: Long-term results. Arch Otolaryngol Head Neck Surg. 1988; 114:291. ■

### Medical Newsletter On HOW TO PASS BOARD OF INTERNAL MEDICINE

To Be Mailed From March To August 1991

For a FREE Sample Copy

Mail Your Address Card To:

Medical Newsletter

5 Cullen Drive, West Orange N.J. 07052.

# HOW ABOUT IT?



Is it fair that only some Maryland physicians support the political activity  
that benefits all physicians?

**JOIN THE CAUSE! GET INVOLVED! GET POLITICAL!**

Join Maryland Medical Political Action Committee

Send your \$100 check to:  
Harold Bob, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201

Contributions to AMPAC and State PAC are not deductible as charitable contributions for Federal income tax purposes.



---

# Thrombolytic Therapy for Acute Myocardial Infarction in the 1990s

---

Mark B. Effron MD and Ralph E. Morales MD

---

*Dr. Effron is the Director, Coronary Care Unit, Division of Cardiology, Department of Medicine, Sinai Hospital of Baltimore and an Assistant Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD. Dr. Morales is the Chief Resident in Medicine, Sinai Hospital of Baltimore, and an Instructor in Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD. Reprints: Mark B. Effron MD, Coronary Care Unit, Sinai Hospital of Baltimore, Belvedere at Greenspring, Baltimore, MD 21215.*

---

*The efficacy of intravenous thrombolytic agents in preserving left ventricular function and in decreasing mortality from an acute myocardial infarction was demonstrated in the 1980s. The 1990s will concentrate on adjunctive therapy to thrombolysis in the treatment of an acute myocardial infarction.*

---

In 1979, the modern thrombolytic era began when Rentrop et al<sup>1</sup> reported the first demonstration of the angiographic efficacy of intracoronary streptokinase in reperfusing an occluded coronary artery. In 1980, DeWood et al<sup>2</sup> presented angiographic evidence of a high prevalence of total coronary occlusion (86 percent) during early transmural myocardial infarction with a 22 percent spontaneous reperfusion rate. The initial Western Washington Trials<sup>3,4</sup> accelerated the modern thrombolytic era by showing a marked reduction in mortality in patients treated with intracoronary streptokinase. Since that trial, the number of investigations of thrombolytic therapy in acute myocardial infarction has mushroomed. The purpose of this paper is to review what is currently known regarding the use of thrombolytic agents in acute myocardial infarction with particular attention to comparative studies on efficacy, mortality reduction, and safety. We will also discuss the current controversies in the use of thrombolytic therapy with particular emphasis on the community hospital setting.

## Review of Trials

The Western Washington Randomized Intracoronary Streptokinase Trial<sup>3,4</sup> convincingly demonstrated a significant reduction in mortality for patients receiving intracoronary streptokinase to treat an acute myocardial infarction (MI). The group of patients treated with intracoronary streptokinase had a reperfusion rate of 68 percent, a three-month mortality of 3.7 percent, and a one-year mortality of 8.2 percent, while the control group had a 12 percent reperfusion rate, a three-month mortality of 11.2 percent, and a one-year mortality of 14.7 percent. Most importantly, patients with complete reperfusion of occluded coronary arteries following intracoronary streptokinase had a 2.5 percent mortality at one year compared to a 15 to 23 percent mortality in patients with partial or no reperfusion.

Because of the delay in starting thrombolytic therapy by the intracoronary route, attempts at thrombolysis using intravenous agents evolved. In the early 1980s, a new thrombolytic agent produced by recombinant technology was introduced -- recombinant tissue plasminogen activator (rtPA). rtPA was shown to be efficacious at dissolving intracoronary thrombi when administered intravenously.<sup>5</sup> However, the first major study showing a beneficial effect of intravenous thrombolytic therapy on mortality was the first Gruppo Italiano per lo Studio della Streptochinasi nell'Infarto Miocardico (GISSI) study<sup>6</sup> reported in 1986 in which streptokinase was used. Almost 12,000 patients were randomized in a double-blind fashion with 10.7 percent mortality in patients treated with streptokinase vs 13 percent in the placebo group. Shortly after the GISSI study was published, the results of trials using rtPA in comparison with placebo were reported showing similar efficacy in reduction of mortality from an acute MI.<sup>7,8</sup> Topol et al<sup>9</sup> then showed the benefits of using rtPA for the recanalization of coronary arteries in a community hospital.

Based on the results of the GISSI trial<sup>6</sup> and the studies showing efficacy of rtPA in lysing coronary thrombi,<sup>7,8,10,11</sup> the Food and Drug Administration (FDA) approved streptokinase and rtPA for use as intravenous agents in acute MI. In 1987, the first randomized trial of streptokinase vs rtPA was published by the Thrombolysis in Myocardial Infarction (TIMI) study group.<sup>11</sup> This study showed a higher coronary patency rate ninety minutes after the infusion of the thrombolytic agent for patients treated with rtPA compared with those treated with streptokinase, with the greatest differences being seen when the agents were given later in the course of the infarction. There was no difference in mortality in this study although the number of patients enrolled was too small to evaluate mortality as an endpoint. However, the extended conclusion drawn from this study was that the agent that could open arteries faster would potentially have a greater reduction in mortality.

In 1988, the Second International Study of Infarct Survival (ISIS-2) group reported on a large trial of intravenous streptokinase vs placebo with an additional randomization to the use of aspirin (180 mg qd).<sup>12</sup> The majority of patients were studied at community hospitals rather than large university centers. The results showed that aspirin alone could reduce mortality (23.9 percent) from an acute MI to the same extent as streptokinase (25 percent) alone when compared with placebo, but the combination of both aspirin and streptokinase proved to be most efficacious (42.9 percent). With the publication of this study, most physicians began to use aspirin in almost all patients with an acute MI. The other remarkable finding was that elderly patients (age 70+ years) had a larger (8 percent) reduction in absolute mortality from thrombolytic therapy combined with aspirin than did younger patients (2.5 percent). Patients treated with streptokinase between six and twenty-four hours after

the onset of symptoms also had a significantly reduced (14 percent) mortality compared with the control population.

In search of a more clot-specific and easier to use thrombolytic agent, anistreplase or APSAC (anisoylated streptokinase-plasminogen activator complex) was created. Anistreplase is made by complexing streptokinase to plasminogen activator to make the compound more clot specific. This complex is then anisoylated, preventing it from working until the anisoyl group is removed by endogenous enzymes. This allows the agent to be given as an intravenous bolus. Its efficacy was demonstrated in the APSAC dans l'Infarctus du Myocarde (APSIM)<sup>13</sup> and APSAC Intervention Mortality Study (AIMS)<sup>14</sup> trials. In APSIM, anistreplase demonstrated a 77 percent reperfusion rate compared with 36 percent in a group treated with heparin only. In AIMS, anistreplase reduced mortality by 50.5 percent at thirty days and by 43 percent at one year when compared with placebo. Anistreplase was approved for use in the treatment of acute MI in late 1989. A comparison of the three FDA-approved thrombolytic agents can be found in the Table.

**Safety.** Thrombolytic agents are not innocuous drugs. The major complication from thrombolytic therapy is bleeding with a particular concern for intracranial hemorrhage. However, if patients at high risk for bleeding are excluded, the risk of bleeding appears to be mainly associated with instrumentation of the patient. In TIMI-1, there was a decrease in the hematocrit of 15 percent and 16 percent in the rtPA and streptokinase groups, respectively.<sup>11</sup> No intracranial bleeding was noted. In the International t-PA/SK Mortality Study, there was a 0.4 percent and 0.3 percent incidence of hemorrhagic stroke in the rtPA and streptokinase patients with a 0.6 percent and 0.9 percent incidence of major bleeding, respectively.<sup>15</sup> With the addition of heparin in the International Study, the incidence of major bleeding was 0.8 percent in the rtPA cohort and 1.2 percent in the streptokinase

**Table. Comparison of Three Approved Thrombolytic Agents**

Dose	Streptokinase 1.5x10 <sup>6</sup> units Over 60 min	rtPA 10 mg bolus 50 mg x 1 hr 40 mg x 2 hr	Anistreplase 30 mg Over 5 min
Infusion pump needed	Yes	Yes	No
Cost per dose	\$73	\$2,200	\$1,700
Half-life	23 min	5 min	90-105 min
90 min patency	50-70%	70-90%	60-70%
4-7 day patency	80-85%	70-80%	75-80%
Antigenicity/ allergic reactions	Yes (5%)	No?	Yes (5%)
Anaphylaxis	0.2%	0.0%	0.2%
Fibrin specificity	Mild	Marked	Moderate
Systemic fibrinolysis	Marked	Mild	Marked
Heparin required	No?	Yes	No
Bleeding complications (without cardiac cath)	Mild	Mild	Mild
Cerebral hemorrhage	<1%	<1%	<1%



group. In the AIMS study, there was a 14 percent incidence of bleeding, with blood loss requiring a transfusion in only 0.8 percent.<sup>14</sup>

Because of their derivation from streptococcal proteins, streptokinase and anistreplase may cause an allergic reaction in patients who have had a recent exposure to a streptococcal infection or either drug. In the International t-PA/SK Study,<sup>15</sup> streptokinase was associated with allergic reactions in 1.7 percent of patients compared with 0.2 percent of patients receiving rtPA. Hypotensive reactions were noted in 1.7 percent of the rtPA group and 3.8 percent of the streptokinase group. Allergic reactions were noted in 2.5 percent of patients receiving anistreplase.<sup>14</sup> There was a 3 percent increase in the incidence of hypotensive episodes in patients treated with anistreplase compared with placebo in the AIMS Trial.<sup>14</sup> Based on the results of the major trials in which these agents were used, there does not seem to be a major difference in side effects which would routinely favor utilizing one agent over the other.

### Current Controversies

**Mortality.** If the total benefit in reduction of mortality was due to the early patency of the infarct-related artery (as noted on the ninety-minute coronary angiogram), then the late decrease in mortality noted in the ISIS-2 study would not be expected. The TIMI-I trial<sup>11</sup> reported that patients treated after six hours of the onset of symptoms had 20 percent or less reperfusion with intravenous streptokinase. Therefore, the patency rate with streptokinase based on the TIMI-I data is the same as the spontaneous reperfusion noted by DeWood et al.<sup>2</sup> The Plasminogen Activator Italian Multicenter Study (PAIMS) investigators<sup>16</sup> showed equivalent patency four days after the infusion of either rtPA or streptokinase with both groups receiving intravenous heparin. The APSIM investigators<sup>13</sup> also showed significant reperfusion at four days, with the AIMS investigators<sup>14</sup> showing similar reduction in mortality with anistreplase compared with other placebo controlled trials using either rtPA or streptokinase. Therefore, the critical issue should not be whether having an open artery is beneficial, but at what time is an open artery needed.

At this time, rtPA is the most widely used thrombolytic agent used in Baltimore metropolitan area hospitals for treatment of acute MI. However, rtPA is also the most expensive thrombolytic agent and has a difficult dosing regimen, needing to be controlled by an infusion pump with close attention by nursing personnel. Major randomized studies have been performed to determine which agent, if any, has an efficacy and safety advantage. The first large scale trials to ask this question were GISSI-2<sup>17</sup> and the International t-PA/SK Mortality Study.<sup>15</sup> The GISSI-2 trial evaluated the efficacy of rtPA versus streptokinase in reducing cardiovascular events in patients admitted with acute MI.<sup>17</sup> There were 12,381 patients ran-

domized over a seventeen-month period to either receive or not receive subcutaneous heparin starting twelve hours after the initiation of thrombolytic therapy. At the time of discharge from the hospital, there was no difference in outcome between those administered rtPA (event rate 23.1 percent) or streptokinase (event rate 22.5 percent), or between the heparin group (event rate 22.7 percent) or the no heparin group (22.8 percent). Subgroup analysis looking at whether thrombolytic therapy combined with heparin or given alone had any major effects did not show any significant difference among the four groups. Mortality data in the GISSI-2 study did not show any difference among the groups although the study population was too small to analyze for mortality as an independent variable.

The International t-PA/SK Study<sup>15</sup> included all of the patients from GISSI-2, as well as patients from thirteen other countries. The protocol was identical to the GISSI-2 study with half of the patients randomized to rtPA and the other half receiving streptokinase (SK). There was also a secondary randomization to subcutaneous heparin at twelve hours as in the GISSI-2 trial. There was a total of 20,891 patients randomized including the patients from the GISSI-2 trial. In-hospital mortality for patients given rtPA was 8.9 percent and for those given streptokinase it was 8.5 percent. When the patients were subsequently analyzed as to the effect of heparin on mortality, the heparin group had an in-hospital mortality of 8.5 percent compared with an 8.9 percent mortality in the no heparin group. Subgroup analysis showed no difference in mortality when either thrombolytic agent was combined with heparin or given as a single agent (rtPA 8.7 percent, rtPA plus heparin 9.2 percent, SK 9.2 percent, SK plus heparin 7.9 percent). A statistically significant but probably clinically insignificant increase in strokes was seen in the rtPA group compared with the other treatments (rtPA 1.4 percent, rtPA plus heparin 1.2 percent, SK 0.9 percent, SK plus heparin 1.0 percent), with no difference in the number of hemorrhagic strokes among the groups. The incidence of stroke was slightly higher in patients above the age of 70 (rtPA 2.7 percent, SK 1.6 percent). Mortality was also higher in the patients above the age of 70 but there was no differential effect on mortality in the elderly between the two agents examined.

**Heparin Therapy.** The results of these two studies suggest that there is no difference in mortality from treatment with rtPA or streptokinase. However, questions have been raised as to whether heparin was used appropriately in these patients. Two recent trials suggest that immediate intravenous heparin is needed to preserve the patency obtained by rtPA. The first, presented in 1989 by Bleich et al,<sup>18</sup> randomized patients presenting within six hours after the onset of an acute MI and receiving 100 mg of rtPA to either intravenous heparin therapy to keep the partial thromboplastin time (PTT) 1.5 to 2.0 times normal or to no heparin. The patients then underwent coronary angiography at



an average of fifty-five hours post-angioplasty and showed a patent infarct artery in 71 percent of the group treated with heparin compared with 44 percent in the group without heparin. However, there was an increased incidence of bleeding in the heparin group with 64 percent having evidence of bleeding compared with 36 percent in the no heparin group. These data may reflect unfairly on the no heparin group, since a platelet inhibitor (i.e., aspirin) was not used by either group in this study.

In early 1990, Ross et al, reporting for the Heparin-aspirin Reinfarction Trial (HART),<sup>19</sup> showed an advantage of intravenous heparin over aspirin in maintaining patency after thrombolysis with rtPA. Patients presenting within six hours of an acute MI received either 100 mg rtPA and were randomized to treatment with either aspirin 80 mg or intravenous heparin to keep the PTT 1.5 to 2.0 times normal. Initial coronary angiograms were performed at an average of eighteen hours after treatment was initiated. The heparin group had an initial infarct artery patency rate of 82 percent compared with 42 percent in the aspirin group. When those patients with open arteries were studied after seven days, there was a 12 percent reocclusion rate in the heparin group vs a 5 percent reocclusion rate in the aspirin group. This difference did not reach statistical significance.

These latter two studies have been used to criticize the results of GISSI-2<sup>16</sup> and the International t-PA/SK Study.<sup>15</sup> The proponents of rtPA therapy state that heparin was given by the wrong route and too late to allow rtPA to have any benefit over streptokinase. However, Bleich et al<sup>18</sup> did not use platelet inhibitors in their study and the dose of aspirin in the HART<sup>19</sup> may have been too low to be of real benefit. The Studio sulla Calciparina nell'Angina e nella Trombosi Ventricolare nell'Infarto (SCATI) Study<sup>20</sup> showed a beneficial effect from the addition of subcutaneous heparin in the first six hours of streptokinase therapy. ISIS-3 is comparing rtPA, streptokinase, and anistreplase with and without heparin. In ISIS-3, patients are randomized to subcutaneous heparin starting four hours after the onset of treatment. The initial results from this study should be available in early 1991.

**Patency.** In order to determine if early sustained patency is more beneficial than patency during the course of hospitalization, the Global Utilization of Streptokinase and rtPA for Occluded Coronary Arteries (GUSTO) study began in the fall of 1990. The study includes patients within six hours of onset of an acute myocardial infarction. All patients are being given aspirin 160 mg and intravenous heparin to maintain the PTT 1.5 to 2.0 times control. Prior to heparinization, patients are being randomized to receive rtPA a total of 100 mg (or adjusted to weight) over ninety minutes, streptokinase 1.5 million units over sixty minutes, or a combination of rtPA 1 mg/kg over 60 minutes combined with 1.0 million units of streptokinase. Rapid administration of rtPA has been

shown by Neuhaus et al<sup>21</sup> to have a patency rate of 91 percent at ninety minutes persisting at twenty-four hours (92.4 percent patency) with intravenous heparin therapy. GUSTO will attempt to see if this increased patency rate correlates with increased survival. The combination of lower dose streptokinase and lower dose rtPA therapy has been shown to decrease the rate of reocclusion.<sup>22</sup> Therefore, if early patency makes a major difference on survival, one of these regimens should show a significant decrease in mortality. This hypothesis will also be tested in GUSTO.

**Myocardial Preservation.** The argument for early patency is better myocardial preservation. However, left ventricular function, as measured by the ejection fraction, has not differed in studies of direct comparison of rtPA and streptokinase<sup>15,23</sup> or in studies using either agent by itself.<sup>23</sup> No matter which agent is used, the ejection fraction is significantly better after treatment with a thrombolytic agent than without treatment.<sup>24</sup> Most studies show that the earlier the thrombolytic agent is given, the greater the improvement in survival.<sup>6,12,24</sup> The advantage to early treatment may be that fresh clots are easier to dissolve than older clots, no matter which agent is used.

**Infarct Expansion.** Infarct expansion has been documented in both animals<sup>25,26</sup> and humans<sup>27,28</sup> following a myocardial infarction. The etiology of infarct expansion is due to slippage of myocytes and supporting structures.<sup>29</sup> It is possible that by reperfusion the area of infarction, expansion may be prevented and retained ventricular geometry may account for improved left ventricular function (determined by the ejection fraction) and survival, even when reperfusion occurs late.<sup>30,31</sup> To date, there are no studies assessing the influence of thrombolytic therapy on infarct expansion in the human nor are there animal studies comparing the influence of the individual agents on infarct expansion.

**Electrical Substrate Stability.** Recent studies<sup>32-35</sup> have examined effects of reperfusion on the signal-averaged electrocardiogram (SAECG). This procedure records 200 to 300 heart beats from three orthogonal leads, and the complexes are averaged, amplified and filtered, and then morphological characteristics are measured (QRS duration, low amplitude signals at the last 40 ms of the QRS complex, and root-mean-square voltage of the last 40 ms of the QRS complex). Abnormalities of these variables are considered evidence of delayed conduction and are felt to represent a pathophysiologic substrate for ventricular re-entrant tachyarrhythmias. The studies performed thus far have shown a lower incidence of SAECG abnormalities when the infarct artery was patent than when the artery was occluded.<sup>32-35</sup> Importantly, this was independent of the thrombolytic agent used. Therefore, infarct artery patency may be important to preserve electrical stability of the heart.

**Post-thrombolytic Care.** Another controversial area is post-thrombolytic care. Should all patients undergo cardiac catheterization and revascularization by percutaneous transluminal coronary angioplasty (PTCA)



or coronary artery bypass surgery, if possible, following thrombolytic therapy? The proponents of this treatment paradigm state that a significant amount of triple vessel and left main coronary artery disease, notwithstanding the often found high-grade residual lesion of the infarct-related vessel, is discovered on routine post-thrombolysis coronary angiography. However, several recent studies challenge the need for routine angiography after thrombolysis. Almost simultaneously, three studies appeared in early 1988 showing a worse outcome from thrombolysis followed by immediate PTCA than with conservative treatment. In the Thrombolysis and Angioplasty in Myocardial Infarction (TAMI-1) study,<sup>36</sup> immediate PTCA was associated with a higher mortality (4 percent vs 1 percent), an increased requirement for transfusion (21 percent vs 14 percent), and a similar frequency of reocclusion (11 percent vs 13 percent). The European Cooperative Study Group (ECSG)<sup>37</sup> reported similar results in 367 patients treated with rtPA, heparin and aspirin, who were randomized to either immediate PTCA or no PTCA. There was an increased incidence of reocclusion and mortality in the PTCA cohort compared with the conservatively treated group (7 percent with PTCA vs 3 percent with conservative therapy). In the TIMI-II A trial,<sup>38</sup> there was a 12.8 percent rate of complications within twenty-four hours of the PTCA. These studies clearly showed immediate PTCA to be a disadvantage to patients treated with thrombolytic therapy for an acute MI.

Recently, several studies have suggested that for a subgroup of post-thrombolysis patients, an invasive strategy may not be needed. The TIMI-II B trial<sup>38</sup> randomized patients to either PTCA or no PTCA following thrombolysis. There was no significant difference in the forty-two-day and the one-year mortality between the two groups. de Bono et al<sup>39</sup> and Barbash et al<sup>40</sup> reported similar results. Therefore, coronary angiography and revascularization may only be needed for evidence of spontaneous or provoked ischemia following thrombolytic therapy, and do not need to be routinely performed.

### Implications for the Community Hospital

How does all this affect the community hospital? In 1989, thirty-nine of the patients admitted to Sinai Hospital of Baltimore with a diagnosis of an acute myocardial infarction were given thrombolytic therapy. If all had been given rtPA, the cost would have been \$85,800 compared with \$2,847 if streptokinase had been used. Even assuming that 20 percent of the patients could not have been given streptokinase due to a recent streptococcal infection, treatment with streptokinase in the past six months, or prior allergic reaction to streptokinase, the cost to the hospital would still have been only \$19,863. If we assume from the data available that mortality from an MI and subsequent left ventricular function does not depend on the thrombolytic agent used, then all

patients would have done equally well if they were given streptokinase, resulting in a cost savings to the hospital of \$61,537 (Figure 1).

If a patient treated with thrombolytic therapy had routine coronary angiography following myocardial infarction, the cost would be \$585. However, in the patient without spontaneous or provokable ischemia, studies<sup>38-40</sup> show that angiography is not needed. As all patients without spontaneous angina will need a stress test to determine if there is any provokable ischemia, the cost of care to a patient without ischemia following thrombolysis would be only \$75. If the data from TIMI-II B<sup>38</sup> and Barbash et al<sup>40</sup> are used, approximately 40 percent of patients will have evidence of recurrent ischemia in the early post-thrombolytic period and will need coronary angiography. Thus, hospital costs would be lower by \$510 in 60 percent of the patients treated with thrombolytic therapy (Figure 2). Although it would cost \$660 (exercise test and angiography) for a patient without spontaneous ischemia but with provokable ischemia, this represents only 15 percent<sup>38,40</sup> of patients' post-thrombolytic therapy so there would still be considerable savings to the hospital.

In summary, treatment with streptokinase would save \$2,127 per patient and a conservative angiography strategy would save \$510 per patient. The key factor is that the combined savings of \$2,637 per patient probably would not alter the quality of the patient's

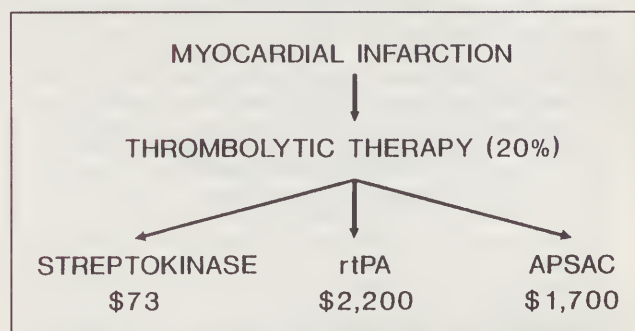


Figure 1. Cost analysis of different thrombolytic regimens in patients with an acute myocardial infarction.

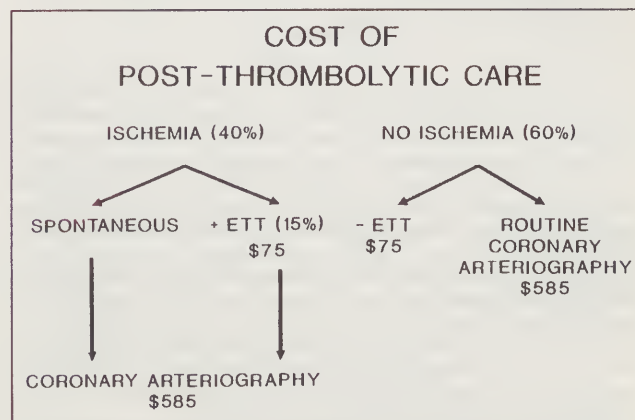


Figure 2. Cost analysis of patients with or without ischemia following thrombolytic therapy comparing invasive vs conservative strategy.



care. In the present era of Diagnostic Related Groupings (DRGs), threats to disallow the Medicare waiver, and decreased Medicare/Medicaid reimbursement, decreasing the cost of care without compromising the quality of care is mandatory. However, not all the answers are available. rtPA may prove to be significantly better than streptokinase and worth the additional \$2,100. The results of the GUSTO Study, which should be available in 1993, may answer that question. As technology develops, it may become worthwhile to follow an invasive strategy following thrombolysis. But as of today, there is no clear-cut benefit from either rtPA or an invasive strategy in the management of post-thrombolysis patients to account for the difference in the cost of caring for a patient with an acute myocardial infarction.

#### Added at Time of Final Proof

Preliminary results of the ISIS-3 trial were reported recently at the meeting of the American College of Cardiology in March 1991.<sup>42</sup> There were 46,092 patients enrolled in this study which evaluated whether there was a difference in mortality among any of the available thrombolytic agents without a significant increase in risk. The preliminary results showed a higher incidence of allergic reactions, hypotension needing treatment, and reinfarction with streptokinase or anistreplase compared with rtPA, and no difference in the rate of major bleeding among the three agents. There was no difference in the thirty-five-day mortality among the three agents, but a 3-4/1,000 increase in intracranial bleeding was seen in the groups treated with rtPA and anistreplase compared with those treated with streptokinase. This increase in the rate of intracranial bleeding with rtPA or anistreplase was highly significant ( $P=0.00001$ ). The addition of subcutaneous heparin to thrombolytic therapy increased the frequency of intracranial bleeding without significantly altering mortality.

The results of the ISIS-3 trial appear to confirm the hypothesis that patients can be treated effectively with thrombolytic agents at a lower cost and possibly with increased safety if streptokinase is the agent of choice. The results of the GUSTO study will determine if more aggressive thrombolytic therapy can significantly improve survival without increasing major morbidity. However, treatment with any thrombolytic agent improves mortality from an acute myocardial infarction. Mortality from acute myocardial infarction can be dramatically reduced in the 1990s if community hospitals increase total and efficient use of thrombolytic agents.

#### References

1. Rentrop P, Balnake H, Karsch KR, Wiegand V, Kostering K, Oster H, Leitz K. Acute myocardial infarction: Intracoronary application of nitroglycerin and streptokinase in combination with transluminal recanalization. *Clin Cardiol* 1979; 2:354-63.
2. De Wood MA, Spores J, Notske RN, Mouser LT, Burriugh R, Golden MS, Lang HT. Prevalence of total coronary occlusion during the early hours of transmural myocardial infarction. *N Engl J Med* 1980; 303:897-903.
3. Kennedy JW, Ritchie JL, Davis KB, Fritz JK. Western Washington randomized trial of intracoronary streptokinase in acute myocardial infarction. *N Engl J Med* 1983; 309:1477-82.
4. Kennedy JW, Ritchie JL, Davis KB, Stadius ML, Maynard C, Fritz JK. The Western Washington randomized trial of intracoronary streptokinase in acute myocardial infarction: A 12 month report. *N Engl J Med* 1985; 312:1073-78.
5. Collen D, Topol EJ, Tiefenbrunn AJ, Gold HK, Weisfeldt ML, Sobel BR, Leinbach RC, Brinker JA, Ludbrook PA, Yasuda I, Bulkley BH, Robison AK, Hutter AM Jr, Bell WR, Spadaro JJ Jr, Khaw BA, Grossbard EB. Coronary thrombolysis with recombinant human tissue type plasminogen activator: A prospective, randomized, placebo-controlled trial. *Circulation* 1984; 70:1012-17.
6. Gruppo Italiano per lo Studio della Streptochinasi nell'Infarto Miocardico (GISSI). Long-term effects of intravenous thrombolysis in acute myocardial infarction: Final report of the GISSI Study. *Lancet* 1987; ii:871-4.
7. Wilcox RG, Von Der Lippe G, Olsson CG, Jensen G, Skene AM, Hampton JR for the ASSET Study Group. Trial of tissue plasminogen activator for mortality reduction in acute myocardial infarction: Anglo-Scandinavian study of early thrombolysis (ASSET). *Lancet* 1988; ii:525-30.
8. Van De Werf F, Arnold AER, European Cooperative Study Group for recombinant tissue-type plasminogen activator (rtPA). Intravenous tissue plasminogen activator and size of infarct, left ventricular function, and survival in acute myocardial infarction. *Br Med J* 1988; 297:1374-79.
9. Topol EJ, Bates ER, Walton JA Jr, Baumann G, Wolfe S, Maino J, Bayer L, Gorman L, Kline EM, O'Neill WW, Pitt B. Community hospital administration of intravenous tissue plasminogen activator in acute myocardial infarction: Improved timing, thrombolytic efficacy, and ventricular function. *J Am Coll Cardiol* 1987; 10:1173-77.
10. Guerci AD, Gerstenblith G, Brinker JA, Chandra NC, Gottlieb SO, Bahr RD, Weiss JL, Shapiro EP, Flaherty JT, Bush DE, Chew PH, Gottlieb SH, Halperin HR, Ouyang P, Walford GD, Bell WR, Fatterpaker AK, Llewellyn M, Topol EJ, Healy B, Siu CO, Becker LC, Weisfeldt ML. A randomized trial of intravenous tissue plasminogen activator for acute myocardial infarction with subsequent randomization to elective coronary angioplasty. *N Engl J Med* 1987; 317:1613-18.
11. Chesebro JH, Knatterud G, Roberts R, Borer J, Cohen LS, Dalen J, Dodge HT, Francis CK, Hillis D, Ludbrook P, Markis JE, Mueller H, Passamani ER, Powers ER, Rao AK, Robertson T, Ross A, Ryan TJ, Sobel BE, Willerson J, Williams DO, Zaret BL, Braunwald E. Thrombolysis in Myocardial Infarction (TIMI) Trial, phase I: A comparison between intravenous tissue plasminogen activator and intravenous streptokinase. Clinical findings through discharge. *Circulation* 1987; 76:142-54.
12. ISIS-2 (Second International Study of Infarct Survival) Collaborative Group. Randomized trial of intravenous streptokinase, oral aspirin, both, or neither among 17,187 cases of suspected myocardial infarction: ISIS-2. *Lancet* 1988; ii:349-60.
13. Bassand JP, Machecourt J, Cassagnes J, Anguenot T, Lussan R, Borel E, Peycelon P, Wolf E, Ducellier D, for the APSIM Study Investigators. Multicenter trial of intravenous anisoylated plasminogen streptokinase activator complex (APSAC) in acute myocardial infarction: Effects on infarct size and left ventricular function. *J Am Coll Cardiol* 1989; 13:988-97.
14. AIMS Trial Study Group. Long-term effects of intravenous anistreplase in acute myocardial infarction: Final report of the AIMS study. *Lancet* 1990; 335:427-31.
15. The International Study Group. In-hospital mortality and clinical course of 20,891 patients with suspected acute myocardial infarction randomized between alteplase and streptokinase with or without heparin. *Lancet* 1990; 336:71-5.
16. Magnani B, for the PAIMS Investigators. Plasminogen activator Italian multicenter study (PAIMS): Comparison of intravenous recombinant single-chain human tissue-type plasminogen activator (rt-PA) with intravenous streptokinase in acute myocardial infarction. *J Am Coll Cardiol* 1989; 13:19-26.
17. Gruppo Italiano per lo Studio della Sopravvivenza nell'Infarto Miocardico. GISSI-2: A factorial randomized trial of alteplase versus streptokinase and heparin versus no heparin among 12,490 patients with acute myocardial infarction. *Lancet* 1990; 336:65-71.
18. Bleich SD, Nichols T, Schumacher R, Cooke D, Tate D, Steiner C, Brinkman D. The role of heparin following coronary thrombolysis with tissue plasminogen activator (t-PA). *Circulation* 1989; 80:II-113.
19. Ross AM, Hsia J, Hamilton W, Chaitman B, Roberts R, Kleiman NS. Heparin versus aspirin after recombinant tissue plasminogen activator therapy in myocardial infarction: A randomized trial. *J Am Coll Cardiol* 1990; 15:64A.
20. The SCATI (Studio sulla Calcioparina nell'Angina e nella



Trombosi Ventricolare nell'Infarto) Group. Randomized controlled trial of subcutaneous calcium-heparin in acute myocardial infarction. *Lancet* 1989; ii:182-6.

21. Neuhaus KL, Feuerer W, Jeep-Tebbe S, Niederer W, Vogt A, Tebbe U. Improved thrombolysis with a modified dose regimen of recombinant tissue-type plasminogen activator. *J Am Coll Cardiol* 1989; 14:1566-69.

22. Grines CL, Nissen SE, Booth DC, Gurley JC, Chelliah N, Blakenship J, Branco M, Bennett K, DeMaria AN, the KAMIT Study Group. A prospective, randomized trial combining half dose tPA with streptokinase to full dose tPA in acute myocardial infarction: Preliminary report. *J Am Coll Cardiol* 1990; 15:4a.

23. White HD, Rivers JT, Maslowski AH, Ormiston JA, Takayama M, Hart HH, Sharpe DN, Whitlock RML, Norris RM. Effect of intravenous streptokinase as compared with that of tissue plasminogen activator on left ventricular function after first myocardial infarction. *N Engl J Med* 1989; 320:817-21.

24. Van Der Werf F. Discrepancies between the effects of coronary reperfusion on survival and left ventricular function. *Lancet* 1989; i:1367-69.

25. Hochman JS, Bulkley BH. Expansion of acute myocardial infarction: An experimental study. *Circulation* 1982; 65:1446-50.

26. Roberts CS, MacLean D, Braunwald E, Maroko PR, Kloner RA. Topographic changes in the left ventricle after experimentally induced myocardial infarction in the rat. *Am J Cardiol* 1983; 51:872-6.

27. Hutchins GM, Bulkley BH. Infarct expansion versus extension: Two different complications of acute myocardial infarction. *Am J Cardiol* 1978; 41:1127-32.

28. McKay RG, Pfeffer MA, Pasternak RC, Markis JE, Come PC, Nakao S, Alderman JD, Ferguson JJ, Safian RD, Grossman W. Left ventricular remodeling after myocardial infarction: A corollary to infarct expansion. *Circulation* 1986; 74:693-702.

29. Weisman HF, Bush DE, Mannis JA, Weisfeldt ML, Healy B. Cellular mechanisms of myocardial infarct expansion. *Circulation* 1988; 78:186-201.

30. Force T, Kemper A, Leavitt M, Parisi AF. Acute reduction in functional infarct expansion with late coronary reperfusion: Assessment with quantitative two-dimensional echocardiography. *J Am Coll Cardiol* 1988; 11:192-200.

31. Hale SL, Kloner RA. Left ventricular topographic alterations in the completely healed rat infarct caused by early and late coronary artery reperfusion. *Am Heart J* 1988; 116:1508-13.

32. Gang ES, Lew AS, Hong M, Wang FZ, Siebert CA, Peter T. Decreased incidence of ventricular late potentials after successful thrombolytic therapy for acute myocardial infarction. *N Engl J Med* 1989; 321:712-6.

33. Turitto G, Risa AL, Zanchi E, Prati PL. The signal-averaged electrocardiogram and ventricular arrhythmias after thrombolysis for acute myocardial infarction. *J Am Coll Cardiol* 1990; 15:1270-76.

34. Chew EW, Morton P, Murtagh JG, Scott ME, O'Keefe DB. Intravenous streptokinase for acute myocardial infarction reduces the occurrence of ventricular late potentials. *Br Heart J* 1990; 64:5-8.

35. Leor J, Hod H, Rotstein Z, Truman S, Gansky S, Goldbourt U, Abboud S, Kaplinsky E, Eldar M. Effects of thrombolysis on the 12-lead signal-averaged ECG in the early post-infarction period. *Am Heart J* 1990; 120:495-502.

36. Topol EJ, Califf RM, George BS, Kereiakes DJ, Abbottsmith CW, Candela RJ, Lee KL, Pitt B, Stack RS, O'Neill WW, and the Thrombolysis and Angioplasty in Myocardial Infarction Study Group. A randomized trial of immediate versus delayed elective angioplasty after intravenous tissue plasminogen activator in acute myocardial infarction. *N Engl J Med* 1987; 317:581-8.

37. Simoons ML, Arnold AER, Betriu A, DeBono DP, Col J, Dougherty FC, von Essen R, Lambert H, Lubsen J, Meier B, Michel PL, Raynaud P, Rutsch W, Sanz GA, Schmidt W, Serruys PW, Thery C, Uebis R, Vahanian A, Van de Werf F, Willems GM, Wood D, Verstraete M, for the European Cooperative Study Group for recombinant tissue-type plasminogen activator (rtPA). Thrombolysis with tissue plasminogen activator in acute myocardial infarction: No additional benefit from immediate percutaneous coronary angioplasty. *Lancet* 1988; i:197-203.

38. The TIMI Study Group. Comparison of invasive and conservative strategies after treatment with intravenous tissue plasminogen activator in acute myocardial infarction: Results of the Thrombolysis



## PROFESSIONAL COMPOUNDING CENTER OF BALTIMORE (Kaye's AID Pharmacy)

DAVID B. LIEBMAN, R.Ph.  
Compounding Pharmacist

6913 Belair Road  
Baltimore, MD 21206

**We Make Medicines  
for Your Patients' Special Needs**

**We ship anywhere  
by UPS FAST SERVICE**

**ABSOLUTELY** no cost to the Physician

**DOCTOR, WHAT CAN WE MAKE FOR YOU?**

**Call or Fax us today!**  
**(301) 665-5192 • Fax 301-668-8533**  
**Toll free 1-800-673-8277**

**Area meetings and course announcements  
are listed each month under  
Doctors Note**

in Myocardial Infarction (TIMI) phase II trial. *N Engl J Med* 1989; 320:618-27.

39. de Bono DP, Pocock SJ, for the SWIFT Investigators Group. The Swift Study of intervention versus conservative management after anistreplase thrombolysis. *Circulation* 1989; 80:II-418.

40. Barbash GI, Roth A, Hod H, Modan M, Miller HI, Rath S, Zahav YH, Keren G, Motro M, Shachar A, Basan S, Arganat O, Rabinowitz B, Lanado S, Kaplinsky E. Randomized controlled trial of late in-hospital angiography and angioplasty versus conservative management after treatment with recombinant tissue-type plasminogen activator in acute myocardial infarction. *Am J Cardiol* 1990; 66:538-45.

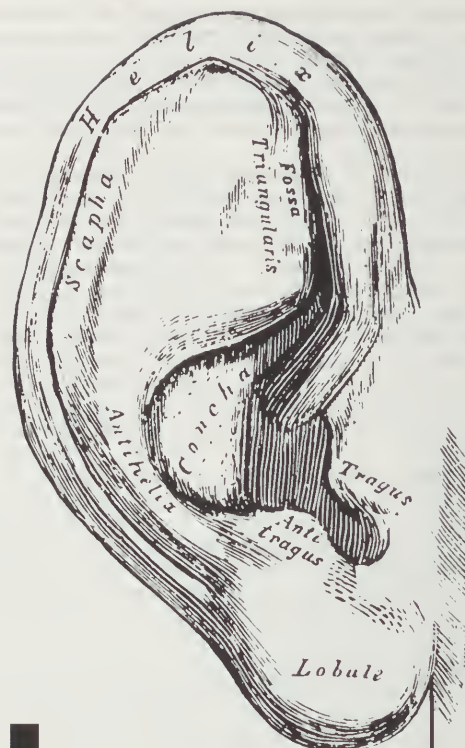
41. Braunwald E. Myocardial reperfusion, limitation of infarct size, reduction of left ventricular dysfunction, and improved survival. Should the paradigm be expanded? *Circulation* 1989; 79:441-4.

42. ISIS-3 Study Group. Presented at the American College of Cardiology 40th Annual Scientific Session. Atlanta, GA. March 5, 1991.

### Acknowledgments

The authors wish to thank Enrico P. Veltri MD for his review of this manuscript and Ms. Patricia McAlvanah for her secretarial assistance.

# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas.... and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
maryland

Free to Med Chi members.



---

# Glaucoma Treatment and the Laser Revolution

---

Irvin P. Pollack MD

---

*Dr. Pollack is Chief, Department of Ophthalmology, The Krieger Eye Institute, Sinai Hospital of Baltimore and an ophthalmologist at The Wilmer Ophthalmological Institute, The Johns Hopkins Hospital, Baltimore, MD.*

---

*The potential uses of laser energy are only beginning to be explored, but it is only a matter of time before we will be able to predictably alter the internal structures of the eye to better control any type of glaucoma.*

---

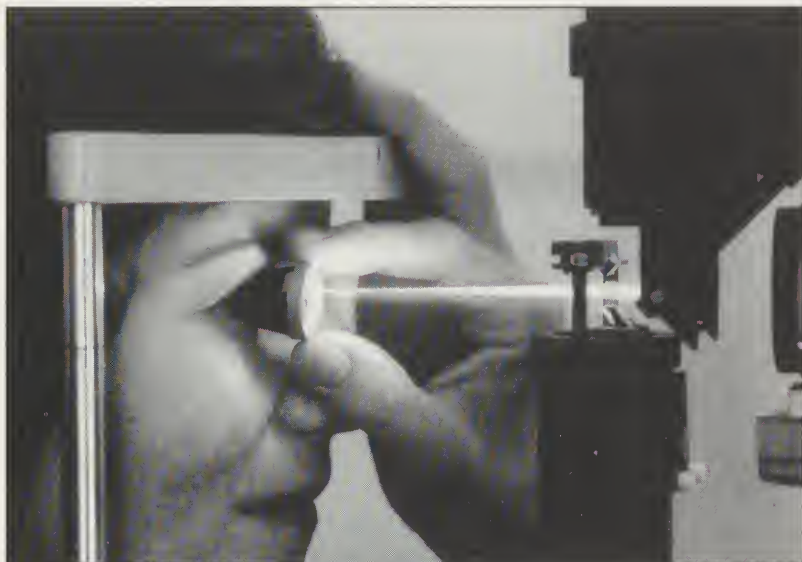
**T**he use of radiant energy to treat glaucoma has been a most exciting addition to the therapeutic management of this disease. Lasers were first introduced to ophthalmology in the 1960s<sup>1,2</sup> and have been used in the treatment of glaucoma since the early 1970s when laser energy was first used to create an iridotomy for the treatment of angle-closure glaucoma.<sup>3-5</sup> In large measure, the argon and Nd:YAG (neodymium: yttrium-aluminum-garnet) lasers have been the principal instruments used, but in recent years we have seen experimentation and further development of the ruby, diode, carbon dioxide, excimer, and tunable dye lasers. Although not without its dangers, laser therapy for glaucoma is relatively safe and enables non-incisional surgery to be performed in an office setting without risking infection. The applications of laser energy to the treatment of glaucoma seem infinite and provide us with additional procedures to control this complicated disease.

## Primary Open-angle Glaucoma

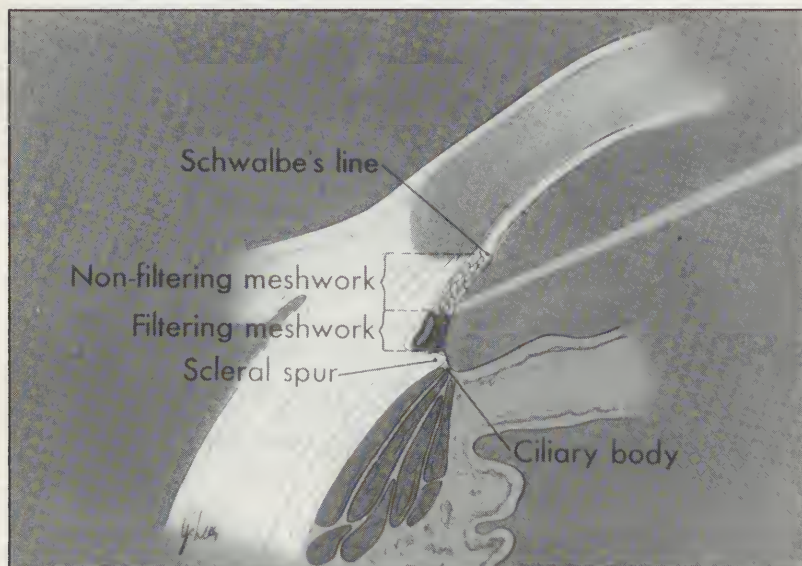
Argon laser trabeculoplasty (ALT) is a surgical technique by which laser energy is directed through a prism-containing contact lens or gonioscope (Figure 1) to create a burn in the trabecular meshwork located in the angle of the anterior chamber (Figure 2). Such treatment of the trabecular meshwork was first successfully used to lower intraocular pressure (IOP) in monkeys<sup>6</sup> and later, in humans.<sup>7,8</sup>

Over the years, we have learned through numerous studies that ALT produces a clinically significant decrease in IOP.<sup>9-13</sup> These studies showed that laser treatment to the anterior chamber angle in persons with primary open-angle glaucoma could produce a 30 to 40 percent decrease in IOP, and this resulted from an 80 percent increase in the mean facility of aqueous outflow.<sup>13</sup>

Laser trabeculoplasty has been considered to be the treatment of choice for those persons whose IOP cannot be brought under medical control and for whom surgery is the only alternative. Because of the relative ease with which ALT can be performed and



**Figure 1.** The laser beam is focused through the optical system of a slit lamp and deflected by the gonioscopic prism into the anterior chamber angle. Here the laser produces a series of burns that result in better outflow of aqueous humor.<sup>24</sup>



**Figure 2.** The argon laser beam is directed into the anterior chamber angle where eighty burns are placed on the trabecular meshwork. They are carefully focused and evenly spaced around the angle circumference and result in a decreased IOP within four weeks of laser treatment.

because of the frequent side effects of medical therapy, there has been a tendency to perform ALT and treat patients with open-angle glaucoma at an early stage of their disease. A current multicentered study has been designed to determine whether ALT might be the preferred alternative to medical therapy of any type once glaucoma has been diagnosed.

Unfortunately, this treatment is not without its limitations. Ten to fifteen percent of patients receive insufficient benefit from the treatment and require conventional filtration surgery. Over the succeeding years, a gradual increase in pressure may occur in many, if not most, of the patients in whom there had

been a significant fall in IOP.<sup>14</sup> This may be due to a diminution of the laser effect, progression of the disease itself, or a combination of both.

If the first treatment was successful, why shouldn't a second treatment be even better? And if the first treatment fails, will a second treatment provide the desired result? Various investigators found that the process of treatment and re-treatment delayed effective therapy in many cases, and permitted continued damage to the optic nerve and loss of visual field. Furthermore, there is no way to know where the trabecular meshwork has been treated, and repeated treatment poses a threat of excessive trabecular destruction and irreversible aggravation of the glaucomatous process.<sup>15</sup> However, re-treatment of patients who underwent ALT eight to ten years earlier is under investigation. Trabecular endothelial cells that might have been damaged during the initial treatment have been replaced and re-treatment in these cases may be helpful.

### Secondary Open-angle Glaucoma

ALT has been found useful in treating pigment dispersion syndrome with glaucoma and exfoliation glaucoma. On the other hand, it has little or no usefulness in the treatment of congenital glaucoma, traumatic glaucoma, or glaucoma associated with uveitis.<sup>16</sup>

### Angle-closure Glaucoma

Most cases of angle-closure glaucoma occur in shallow-chambered eyes where the aqueous humor cannot pass freely from the posterior chamber through the pupil into the anterior chamber. This functional pupillary block causes a build-up of aqueous humor in the posterior chamber, leading to a forward shift of the peripheral iris and closure of the anterior chamber angle. Before 1973, angle-closure glaucoma was routinely treated by excising a small piece of peripheral iris (iridectomy), following which the patient was routinely hospitalized for two to four days. Outpatient laser iridotomy was a revolutionary concept and gained acceptance slowly.<sup>17-19</sup> Early research with the ruby laser gave way to development of new lasers with different wavelengths and new techniques for delivering the laser energy, as well as new ways to create the iridotomy itself.

Following its adaption to the slit lamp, the argon laser soon became available in most centers of ophthalmic research, mainly for the treatment of retinal disease.<sup>20-22</sup> Having a wavelength of 455-515 nm, the blue-green beam is transmitted through the refractive



media of the eye with relatively low absorption, and the quality of its burn is dependent on the presence of pigment in the retina, iris, or trabecular meshwork. Its focusing quality made it well-suited for creation of iridotomies to break pupillary block in angle-closure glaucoma.

Using the continuous-wave argon laser, iridotomies were successfully performed in monkeys,<sup>18</sup> Dutch-belted rabbits,<sup>23</sup> and in humans.<sup>3-5</sup> Early experience revealed that a laser iridotomy could be performed with 98 percent success within a few minutes using 1,000 mW with a 50 micron spot for 0.2 seconds.<sup>24</sup>

By this technique, one could dramatically break an acute attack of glaucoma and control chronic angle-closure glaucoma. (Figure 3) The patient experiences minimal or no pain. Mild photophobia, blurred vision and ocular redness is self-limited, and these side effects are controlled with postoperative topical prednisolone eye drops. A major complication was postoperative rise in IOP lasting one to three hours in most patients, but even this complication has been all but eliminated by pretreatment with apraclonidine, a topical alpha-2 agonist.<sup>25</sup>

In about 2 percent of cases, an argon laser iridotomy cannot be successfully performed. Furthermore, there occasionally occurs a thermal insult to the overlying cornea or underlying lens. For this reason, there developed increased interest in a pulsed laser that might succeed when the argon laser failed.<sup>26</sup>

The Q-switched Nd:YAG laser can reliably produce an iridotomy with fewer than ten pulses and with less energy than the argon laser.<sup>27</sup> On the other hand, bleeding from the iridotomy site is a common complication and a major concern. Iris bleeding is more

likely to occur in an inflamed eye, and many surgeons still prefer the argon laser iridotomy where bleeding does not occur, reserving Nd:YAG iridotomy for the uninflamed eye and for argon laser failures. One can also pretreat the site with the argon laser before completing the iridotomy with the YAG laser. Long-term studies indicate that the Nd:YAG iridotomy is as safe as argon iridotomy.<sup>28</sup>

### The Effect of Various Wavelengths

The blue-green argon laser (455-515 nm) and the near-infrared Nd:YAG laser (1064 nm) are the most commonly used wavelengths for creating an iridotomy. The argon laser is also used for trabeculoplasty. However, other lasers employing different wavelengths have been investigated for both of these procedures.

The krypton laser (647 nm) has been successfully used to make iridotomies<sup>29</sup> and the Nd:YAG laser has been used for trabeculoplasty.<sup>30</sup>

An ideal laser might certainly be one that allows any desirable wavelength to be dialed into use. The tunable dye laser using the organic dye, rhodamine-6-G, and having a wavelength of 600 nm emitted in 3 millisecond pulses, has been used to create iridotomies. However, a lower success rate, more bleeding, and pigment dispersion limit the usefulness of this technique.<sup>31</sup>

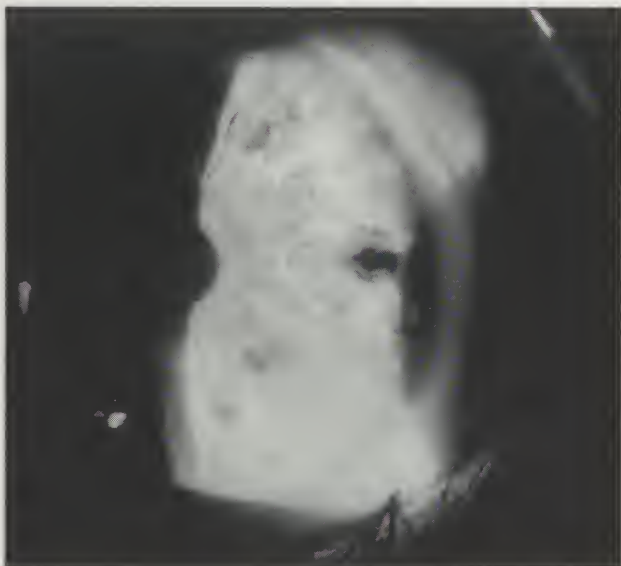
The semiconductor diode laser (810 nm) may be another alternative. Although still experimental, it has been shown to have a similar success and complication rate to that of the argon laser when used to produce iridotomies in rabbit eyes.<sup>32</sup>

### Current Research

The laser's greatest value is that it can perform intraocular surgery without making an incision in the eye. The laser beam has the capability, under certain circumstances, to reach the internal structures of the eye by passing through the cornea or scleral coat. Under ideal conditions, it will leave the tissue through which it passes undistributed; yet produce the desired thermal response in the tissue on which the laser is being focused.

Transcorneal sclerostomy is the technique by which the argon or Nd:YAG laser is used to drill a hole through the trabecular meshwork and the overlying sclera to produce a defect similar to that produced by a surgical filtration operation. This allows the excess aqueous humor to escape through the sclerostomy and prevents any build-up of IOP. The aqueous humor collects under the conjunctiva on the surface of the eye (filtering bleb) before again entering the blood system.<sup>33</sup>

One can also make a sclerostomy with a continuous-wave Nd:YAG contact endolaser<sup>34,35</sup> or with an argon endolaser.<sup>36</sup> The endolaser is passed through the anterior chamber and burns a hole through the trabecular meshwork and sclera. Here, again, aqueous humor passes through the sclerostomy and forms a filtering bleb on the surface of the eye.



**Figure 3.** An iridotomy can be performed easily with either the argon or Nd:YAG laser with better than 98 percent success. The iris hole allows aqueous humor trapped behind the iris by pupillary block to enter the anterior chamber and gain access to the trabecular meshwork and outflow channels. This produces a prompt decrease in IOP in cases of acute angle-closure glaucoma and better control of chronic angle-closure glaucoma.

Cyclophotocoagulation is a technique by which the ruby laser<sup>37</sup> or YAG laser<sup>38</sup> causes destruction of the ciliary body after passing through the sclera. Cyclo-destruction results in hyposecretion and may produce a dramatic lowering of IOP. However, because of the destructive nature of this treatment and the chance of producing hypotony (phthisis) and visual loss, this technique is reserved for neovascular and end-stage glaucoma where all other treatment has failed.

The concept is a very attractive one and experiments are now being conducted with other lasers including the diode (810 nm). The diode laser has the additional benefit of being smaller and much less expensive than the Nd:YAG laser. The carbon dioxide (10,800 nm), the excimer (193 nm), and the holmium (2.1 nm) lasers are also being investigated for their ability to produce a sclerostomy by making an opening through the sclera and then into the anterior chamber with little or no scarring or bleeding.

### Summary

We are just beginning to see the potential uses of laser energy to treat glaucoma. Each of the lasers described here has technical problems that make them less than perfect, but it is only a matter of time before we will be able to predictably alter the internal structures of the eye to better control any type of glaucoma.

### References

- Campbell CJ, Rittler MC, Koester CJ. The optical laser as a retinal coagulator: An evaluation. *Trans Am Acad Ophthalmol* 1963; 67:58.
- Zweng HC, Flocks M, Kapany NS et al. Experimental laser photocoagulation. *Am J Ophthalmol* 1964; 58:353.
- Hager H. Besondere mikrochirurgische Eingriffe. 2. Teil. Erste Erfahrungen mit dem Argon-Laser-Geraet 800. *Klin Monatsbl Augenheilkd* 1973; 162:437-50.
- Abraham RK, Miller GL. Outpatient argon laser iridectomy for angle closure glaucoma: A two-year study. *Trans Am Acad Ophthalmol Otolaryngol* 1975; 79:529-38.
- Pollack IP, Patz. Argon laser iridotomy: An experimental and clinical study. *Ophthalmic Surg* 1976; 7:22-30.
- Worthen DM, Wickham MG. Argon laser trabeculotomy. *Trans Am Acad Ophthalmol Otolaryngol* 1974; 78:371-5.
- Wickham MG, Worthen DM. Argon laser trabeculotomy: Long-term follow-up. *Ophthalmology* 1979; 86:495.
- Wise JB, Witter SL. Argon laser therapy for open-angle glaucoma: A pilot study. *Arch Ophthalmol* 1979; 97:319.
- Wise JB. Long-term control of adult open-angle glaucoma by argon laser treatment. *Ophthalmology* 1981; 88:197.
- Schwartz AL, Whitten ME, Bleiman B et al. Argon laser trabecular surgery in uncontrolled phakic open-angle glaucoma. *Ophthalmology* 1981; 88:203.
- Wilensky JI, Jampol LM. Laser therapy for open-angle glaucoma. *Ophthalmology* 1981; 88:213.
- Thomas JV, Simmons RJ, Belcher CD. Argon laser trabeculoplasty in the management of the presurgical glaucoma patient. *Ophthalmology* 1983; 89:187.
- Pollack IP, Robin A. Argon laser trabeculoplasty: Its effect on medical control of open-angle glaucoma. *Ophthalmic Surg* 1982; 13:637.
- Schwartz AL, Love DC, Schwartz MA. Long-term follow-up of argon laser trabeculoplasty for uncontrolled open-angle glaucoma. *Arch Ophthalmol* 1985; 103:1482-84.
- Gaasterland D, Kupfer C. Experimental glaucoma in the Rhesus monkey. *Invest Ophthalmol* 1974; 13:455.
- Robin AL, Pollack IP. Argon laser trabeculoplasty in secondary forms of open angle glaucoma. *Arch Ophthalmol* 1983; 101:382.
- Snyder WB. Laser coagulation of the anterior segment: 1. Experimental laser iridotomy. *Arch Ophthalmol* 1967; 77:93-8.
- Zweng HC, Paris GL, Vassiliadis A et al. Laser photocoagulation of the iris. *Arch Ophthalmol* 1970; 84:193-9.
- Beckman H, Sugar HS et al. Laser iridectomies. *Am J Ophthalmol* 1971; 72:393-402.
- L'Esperance FA Jr. An ophthalmic argon laser photocoagulation system: Design, construction and laboratory investigations. *Trans Am Ophthalmol Soc* 1968; 66:827-904.
- Zweng HC. Lasers in ophthalmology, In: Wolbarscht ML, ed. *Laser Application in Medicine in Biology*. New York: Plenum Press 1971:239-54.
- Patz A, Maumenee AE, Ryan SJ. Argon laser photocoagulation: Advantages and limitations. *Trans Am Acad Ophthalmol Otolaryngol* 1971; 75:569-79.
- Khuri CH. Argon laser iridectomies. *Am J Ophthalmol* 1973; 76:490-3.
- Pollack IP. Use of argon laser energy to produce iridotomies. *Trans Am Ophthalmol Soc* 1979; 77:674-706.
- Robin AL, Pollack IP, DeFaller JM. Effects of topical ALO 2145 (p-aminoclonidine hydrochloride) on the acute intraocular pressure rise after argon laser iridotomy. *Arch Ophthalmol* 1987; 105:1208-11.
- Robin AL, Pollack IP. Q-switched neodymium:YAG laser iridotomy in patients in whom the argon laser fails. *Arch Ophthalmol* 1986; 104:531-5.
- Robin AL, Pollack IP. A comparison of neodymium:YAG and argon laser iridotomies. *Ophthalmology* 1984; 91:1011-16.
- Del Priore LV, Robion AL, Pollack IP. Neodymium:YAG and argon laser iridotomy. Long-term follow-up in a prospective, randomized clinical trial. *Ophthalmology* 1988; 95:1207-11.
- Yassur Y, David R, Rosenblat I, Marmour U. Iridotomy with grid krypton laser. *Brit J Ophthalmol* 1986; 70:295-7.
- Fankhauser F, Rol P. Microsurgery with the neodymium:YAG laser: An overview. *Int Ophthalmol Clin* 1985; 25:55-84.
- Wihart PK, Hitchings RA. Neodymium: YAG and dye laser iridotomy -- a comparative study. *Trans Ophthalm Soc UK* 1986; 105:521-40.
- Jacobson JJ, Schuman JS, Koumy HE, Puliafito CF. *Int Ophthalmol* 1990; 30:120.
- March WF, Gherezghiher T, Koss MC et al. Histologic study of a neodymium:YAG laser sclerostomy. *Arch Ophthalmol* 1985; 103:860.
- Federman JL, Wilson RP, Ando F et al. Contact laser: thermal sclerostomy ab interna. *Ophth Surg* 1987; 18:726-7.
- Javitt JC, Robin AL, Pollack IP. Uses of the neodymium:YAG laser in the treatment of open-angle glaucoma. *Ophthalmol Clin N Amer* 1988; 1:265-75.
- Gaasterland D, Hennings D, Boutacoff T, Bilek C. Ab interno and ab externo filtering operations by laser contact surgery. *Ophthalmic Surg* 1987; 18:254-7.
- Beckman H, Kinosheta A, Rota A et al. Transscleral ruby laser irradiation of the ciliary body in the treatment of intractable glaucoma. *Trans Am Acad Ophthalmol Otolaryngol* 1972; 46:423-36.
- Wilensky JT, Welch D, Mirolovich M. Transscleral cyclocoagulation using a neodymium:YAG laser. *Ophthalm Surg* 1985; 16:95-8.



---

# The Neurosurgical Treatment of Intracranial Aneurysms in the Community Hospital

Ronald J. Cohen MD, FACS

*Dr. Cohen is Assistant Professor of Neurosurgery, The Johns Hopkins Medical School and Attending Neurosurgeon, Sinai Hospital of Baltimore, Baltimore, MD.*

---

*A consecutive series of operations for thirty intracranial aneurysms in twenty-eight patients illustrates that patients with ruptured intracranial aneurysms can undergo surgery safely in an appropriately equipped community hospital.*

---

This paper reports the results of surgical treatment in a consecutive series of patients who underwent operations for intracranial aneurysms. The operations were performed by the author at Sinai Hospital of Baltimore over a nine-and-one-half-year period. The series represents all patients who underwent surgery for intracranial aneurysms for whom the author was the operating surgeon, with no attempt to select or exclude any cases over the time of the study. It is the thesis of the author that both ruptured and unruptured aneurysms can be safely treated at the community hospital level, provided that certain facilities are available.

As more neurosurgeons are trained and enter practice, there is a reduction in the number of major intracranial cases encountered by individual neurosurgeons outside the academic/medical training institution environment. This decrease in the intracranial surgery case load for the average practicing neurosurgeon has led some to argue for centralization of care and, in effect, to restrict certain kinds of neurosurgical cases to large centers. Cranial surgery for aneurysms and tumors has always been a standard by which neurosurgical practices have been judged, as well as acting as a yardstick by which the American Board of Neurological Surgery can assess the activity of particular neurosurgeons.

Two prior articles<sup>1,2</sup> have dealt with the results of infrequent aneurysm surgery. Both of these reports indicate that neurosurgeons with adequate training and judgment can achieve favorable results by operating only occasionally on aneurysm patients, and that this can be accomplished in the community hospital setting.

## Materials and Methods

Twenty-eight patients with a total of thirty aneurysms underwent surgery. There were twenty-one women and seven men, with an age range of twenty-one to seventy-seven years (Table). All cases were operated on at Sinai Hospital of Baltimore. A physician's assistant assisted in twelve cases, including both of the cases in which a patient had two aneurysms and the case with the basilar summit aneurysm. Another neurosurgeon assisted in

**Table. Summary of Clinical Data**

Case No.	Age	Sex	Grade	Location of Aneurysm	Surgical Treatment	Result
1	68	F	III	posterior communicating	clipped	good
2	63	F	I	R middle cerebral	clipped	good
3	35	F	III	anterior communicating	clipped	died
4	77	F	III	anterior communicating	clipped	good
5	40	M	III	anterior communicating	clipped	good
6	67	F	IV	R posterior communicating	clipped	good
7	74	F	III	L middle cerebral	clipped	good
8	61	F	III	R anterior choroidal	clipped	poor
9	52	M	0	anterior communicating	clipped	good
10	46	F	II	L middle cerebral	clipped	good
11	41	F	II	L anterior choroidal	clipped	good
12	58	M	II	anterior communicating	clipped	good
13	21	F	II	L posterior communicating	clipped	good
14	28	F	I	R posterior communicating	clipped	good
15	42	F	II	anterior communicating	clipped	good
16	61	F	III	anterior communicating and L posterior communicating	clipped both	fair
17	52	F	V	anterior communicating	clipped	good
18	46	M	I	R posterior communicating	clipped	good
19	52	F	IV	anterior cerebral/pericallosal	clipped	good
20	47	F	I	R posterior communicating	clipped	good
21	57	M	I	anterior communicating	clipped	good
22	46	F	I	R posterior communicating	clipped	good
23	30	F	I	anterior cerebral/pericallosal	clipped	good
24	29	M	I	basilar summit and carotid bifurcation	clipped both	good
25	55	M	III	R posterior communicating	clipped	died
26	35	F	I	R middle cerebral	clipped	good
27	61	F	0	R middle cerebral	clipped	good
28	59	F	0	internal carotid (giant)	R internal carotid ligation	good

eleven cases, and five cases included a general surgical resident assistant.

The locations of the aneurysms were as follows: nine anterior communicating, three middle cerebral, nine posterior communicating, two anterior choroidal, two aneurysms at the junction of the second and third segments of the anterior cerebral artery, one aneurysm at the bifurcation of the internal carotid into the anterior and middle cerebral arteries, one basilar summit aneurysm, and one giant aneurysm of the internal carotid artery.

The least number of cases done in any calendar year was two. This occurred in 1981, 1984, 1986, 1987, and 1988. The most number of cases performed in any calendar year was five, in 1989.

All patients except three presented with subarachnoid hemorrhages. Patient grades on admission were determined by the criteria of Hunt and Hess.<sup>3</sup> There were nine patients who were grade I, five patients who were grade II, eight patients who were grade III, two patients who were grade IV, and one patient who was grade V.

The three patients with unruptured aneurysms were designated as grade 0. An anterior communicating aneurysm was discovered in the first patient during the course of a computerized axial tomography (CAT) scan during evaluation of the patient who had chronic headaches. The second was a patient who underwent angiography for a stroke and was found to have a middle cerebral artery aneurysm ipsilateral to her

symptomatic carotid stenosis. The third was a patient who presented with severe retro-orbital pain and a third cranial nerve palsy secondary to a giant aneurysm of the internal carotid artery.

The time interval between the subarachnoid hemorrhage and the surgical treatment of the ruptured aneurysms varied between one day and sixty-seven days. In general, the patients were studied by four-vessel cerebral angiography as soon as their condition permitted. Surgery was performed as early as possible, usually within the first few days after the hemorrhage, provided that the patient's neurological condition was not deteriorating. During the pre- and postoperative period, all patients were placed on dexamethasone, and nearly all were placed on a calcium channel blocker (currently nimodipine).

All patients, with the single exception of the patient who underwent internal carotid ligation for the giant internal carotid aneurysm, had surgery using a Zeiss operating microscope.

A frontotemporal pterional osteoplastic craniotomy was utilized in all cases, including the basilar summit aneurysm. Hypotensive anesthesia with sodium nitroprusside was employed during the aneurysm dissection in every case, and barbiturate coma was employed as an adjuvant for the clipping of the basilar aneurysm. A variety of anesthesiologists and nurse anesthetists administered anesthesia. None of the cases required lumbar cerebrospinal drainage; instead, microsurgical fenestration of the chiasmatic cistern provided adequate brain relaxation in every instance.

## Results

All the aneurysms in this series were surgically clipped, with the exception of the giant aneurysm which was treated by internal carotid ligation. Since anything less than a clipped aneurysm was regarded as suboptimal treatment, all the aneurysms were dissected microsurgically to allow adequate clipping. In dissecting these aneurysms, two ruptured intraoperatively -- one posterior communicating aneurysm, and the basilar aneurysm which ruptured during the closure of the clip. In both cases, a second clip was applied and the outcome was not adversely affected.

Utilizing the criteria established by Yasargil and Fox,<sup>4</sup> twenty-four of the twenty-eight patients had good outcomes. Sixteen of these were entirely normal at discharge and follow-up, four had very mild naming or amnesic difficulty, and four had third cranial nerve



palsies residual to their aneurysmal rupture. The only patient who experienced a third nerve palsy secondary to the surgery itself was the patient with the basilar artery aneurysm. All the third nerve palsies improved, including that of the patient with the basilar aneurysm and that of the patient with the giant aneurysm following carotid ligation.

One patient had a fair outcome. This sixty-one-year-old woman suffered an aphasic/abulic syndrome secondary to her subarachnoid hemorrhage, and underwent clipping of both a posterior communicating aneurysm and an anterior communicating aneurysm during the same operation. She showed significant neurological improvement but required transfer to a chronic rehabilitation facility.

One patient had a poor outcome. This patient suffered a ruptured anterior choroidal aneurysm and was grade III preoperatively. The separation of the neck of the aneurysm from the anterior choroidal artery was not possible during dissection of the aneurysm and the clip had to be placed across both the aneurysm and the anterior choroidal artery. The patient was left with a dense subcortical hemiparesis but made an otherwise uncomplicated recovery.

There were two deaths. Both patients had suffered massive subarachnoid hemorrhages. They underwent surgery on the third and fifth day after the subarachnoid hemorrhages, respectively, showed no immediate new deficits after the surgery, but developed uncontrollable brain swelling which was unresponsive to medical and, finally, surgical management. These were the only patients in the series in whom cerebral swelling was at all a problem in management.

### Discussion

Subarachnoid hemorrhage from a ruptured intracranial aneurysm represents a life-threatening illness requiring immediate medical management. The early evaluation and treatment of patients suffering from this disease usually take place in an emergency room close to where the ictus occurred. The diagnosis can be made and therapy instituted as arrangements are made for angiography at the earliest opportunity, in keeping with the patient's neurological condition.

The present series illustrates that the treatment of ruptured intracranial aneurysms can be successfully accomplished at the community hospital level. The basic requirements include a well-staffed intensive care unit able to monitor the neurological condition of the patient (intracranial pressure monitors were not used in any of these cases); a neuroradiologist able to perform complete (four vessel) cerebral angiography; an experienced surgical assistant (either a well-trained physician's assistant, resident surgeon or, preferably, another neurosurgeon); an array of surgical equipment including an operating microscope, microinstruments, and an adequate inventory of aneurysm clips and appliers; and anesthesia personnel experienced with hypotensive anesthesia. Most of these essentials

are available in the community hospital setting, and it remains for the individual neurosurgeon to decide whether to make the commitment to treat these complex and challenging patients him/herself, or to transfer the care of these patients to other facilities.

### References

1. Koenig GH. Aneurysm surgery in a community setting. *Neurosurgery* 1988; 22:501-2.
2. Helme WB. Infrequent aneurysm surgery. *Neurosurgery* 1978; 2:210-2.
3. Hunt WE and Hess RM. Surgical risk as related to time of intervention in the repair of intracranial aneurysms, *J Neurosurg* 1968; 28:14-20.
4. Yasargil MG and Fox JL. The microsurgical approach to intracranial aneurysms. *Surg Neurol* 1975; 3:7-14.

### THE MAGNIFICENT SEVEN ARE AT YOUR SERVICE.



**T**he seven PSA Financial affiliated companies are specialists, each in its own sphere of operation. Individually and in combination, they provide financial services, risk management and investment counseling to the medical profession, and over the years have gained recognition as outstanding performers in their several fields.

Contact any of our affiliates to enjoy the satisfaction and sense of security that comes from having probably the best financial service specialists in the business on your side.

Planning for our  
Clients Financial Future  
Since 1928.



**PSA Financial Center**  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

**PSA Professional Liability, Inc.**  
*Malpractice Insurance*

**PSA Financial, Inc.**  
*Employee Benefits*

**PSA Financial Advisors, Inc.**  
*Financial Planning*

**PSA Capital Management, Inc.**  
*Investment Management*

**PSA Pension Services, Inc.**  
*Design & Administration*

**PSA Insurance, Inc.**  
*Agents & Brokers*

**PSA Equities, Inc.**  
*Broker / Dealer*

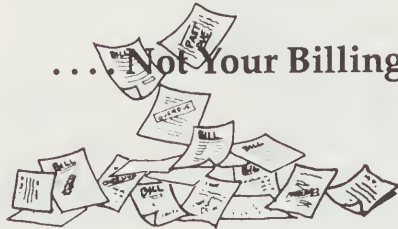
### PHYSICIANS:

M.D.'s with general medical, surgical, or Family Practice background to work as urgent care physicians in busy hospital Emergency Department. Part-time/full-time positions available. Competitive salary; flexible hours.

For details, contact: Dan K. Morhaim, M.D.  
Franklin Square Hospital Center  
9000 Franklin Square Drive  
Baltimore, MD 21237  
(301) 682-7046

## You Should Be Taking Care of Your Patients

... **Not Your Billing**



**PPBSI**

Physician's Professional Billing Services, Inc.

**Leaders in technological billing since 1976**

...

Will speed up your cash and cure ailing accounts.

...

- Professional management available to represent your office to Medicare, Blue Shield, Medical Assistance and other insurance carriers.
- Our service relieves your staff from processing self-pay statements.
- Self-pay bills with individualized messages at your prescribed intervals.
- Secondary commercial insurance claims are automatically rebilled.
- A multitude of statistical reports are available, including complete financial audit trails and management reports.

...

**Call today so we may treat you.**

1•800•969•8382 / 1•301•825•5626

Locations in D.C. and Baltimore to serve you.

**PPBSI**

Physician's Professional Billing Services, Inc.

7215 York Road, Baltimore, Maryland 21212  
or phone (301) 825-5626

Please fill out and return this coupon promptly for more  
information about the many benefits that  
Physician's Professional Billing Services, Inc. can offer you.

Name \_\_\_\_\_

Address \_\_\_\_\_

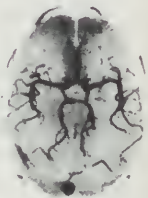
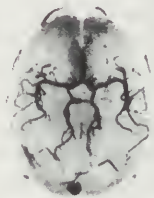
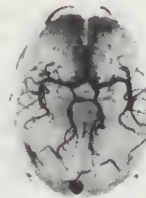
City \_\_\_\_\_ State \_\_\_\_\_

Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_

## A New Era of MRI Capability



### Three-Dimensional Magnetic Resonance



### Magnetic Resonance Angiography

- MRI/MRA technology not available anywhere else in the immediate area
- 1.0 tesla magnet manufactured by Siemens, a world leader in advancing MRI applications
- Convenient location, 1/2 mile east of I-95, on the campus of the Greater Laurel-Beltsville Hospital
- Board Certified Radiologists with training and experience in MRI.
- Next Day scheduling in most cases

**Open Monday - Friday**  
8:00 AM to 11:00 PM

**MARYLAND  
DIAGNOSTIC  
IMAGING  
CENTER**

7400 Van Dusen Road  
Laurel, Maryland 20707

(301) 725-8995



---

# Stress Testing: Optimal Use of the Various Modalities of Stress Testing in the Diagnosis of Coronary Artery Disease

---

Romulo F. Baltazar MD, FACP, FACC

---

*Dr. Baltazar is Director, Cardiac Non-invasive Laboratory, Division of Cardiology, Department of Medicine, Sinai Hospital of Baltimore, and Assistant Professor of Medicine, The Johns Hopkins University, School of Medicine, Baltimore, MD. Reprints: Romulo F. Baltazar MD, Division of Cardiology, Sinai Hospital of Baltimore, MD 21215.*

---

*Stress testing is useful in the diagnosis of coronary artery disease and in quantitating levels of fitness, evaluating rehabilitation progress, screening exercise-related arrhythmias, and evaluating medication efficacy.*

---

**S**tress testing is useful in the diagnosis of coronary artery disease (CAD) and in the overall evaluation of patients suspected of having cardiac disease. It is helpful in quantitating levels of physical fitness, evaluating the progress of patients engaged in cardiac rehabilitation programs, screening exercise-related cardiac arrhythmias, and evaluating the efficacy of anti-anginal or anti-arrhythmic medications. More recently, the exercise test has been found useful in the stratification of patients with acute myocardial infarction prior to hospital discharge.

Various modalities of stress testing are currently available for the evaluation of patients with chest pain syndromes. The object of this article is to review these different modalities so that the referring physician and the practicing cardiologist may become aware of the developing technologies in this field and be able to use them optimally in patients suspected of having CAD.

## Exercise Stress Testing

Electrocardiographic exercise testing continues to be one of the most important procedures in the evaluation of patients with cardiac disease. It is the simplest, fastest, and least expensive procedure with fairly reasonable sensitivity and specificity for diagnosing CAD. The electrocardiogram (ECG) serves not only as a continuous monitor to ensure the safety of the patient during exercise testing but also provides the primary basis by which myocardial ischemia is diagnosed. ST segment abnormalities can occur during exercise testing in the absence of anginal symptoms, manifest earlier than the onset of pain, and persist much longer after pain has subsided<sup>1</sup> and are, therefore, a sensitive and specific marker for myocardial ischemia.

**Diagnostic Criteria.** The electrocardiographic criterion of a positive ischemic response has continued to evolve ever since exercise testing was first used in the evaluation of patients with CAD. ST segment abnormalities remain the most widely accepted criteria for myocardial ischemia and are based on the appearance of at

least 0.1 mV (1 mm) of horizontal or downsloping ST segment 80 msec after the J point. In addition, there is now evidence to show that slow upsloping ST depression during exercise testing is also associated with significant coronary events similar to the classic ischemic patterns<sup>2</sup>-- many laboratories<sup>2-4</sup> accept slow upsloping ST depression as evidence of ischemia. At least 2 mm of ST segment depression measured from the J point should be present,<sup>2</sup> although Ellestad believes that ST depression of 1.5 mm measured 60 msec after the end of the QRS complex may have the same significance.<sup>5</sup>

ST elevation of at least 1 mm in a patient without previous infarction occurs less often but is more specific than ST segment depression, and is also considered a positive ischemic response. In contrast to ST segment depression which is due to subendocardial ischemia, ST elevation is a more advanced form of ischemia indicating transmural involvement and is usually due to a significant proximal high-grade stenotic lesion<sup>6,7</sup> or vasospasm of a major coronary artery.<sup>8</sup> Unlike ST segment depression which poorly localizes the coronary lesion,<sup>9,10</sup> ST segment elevation provides an accurate anatomic location of the coronary artery involved.<sup>10</sup> ST segment elevation occurring in the anterior precordial leads, especially in leads V1 or aVL, is usually due to a lesion involving the left anterior descending coronary artery.<sup>11</sup> ST elevation of the inferior leads localizes the lesion to the posterior descending coronary artery<sup>9</sup> which is usually due to right coronary artery disease. In patients who have previous myocardial infarction, ST segment elevation occurring in leads with Q waves or leads adjacent to Q waves does not necessarily imply transmural ischemia but is associated with a completely occluded coronary artery, usually with underlying wall motion abnormality including a high incidence of left ventricular aneurysm.<sup>12,13</sup>

Another lesser known but nevertheless highly specific criterion for myocardial ischemia is U wave inversion. One of the reasons why U wave has not been commonly used as a marker for CAD is its very low sensitivity. Although uncommon, it is highly indicative of left anterior descending coronary artery occlusion when induced by exercise.<sup>14</sup>

**Less Specific Criteria.** There are other electrocardiographic measurements suggested as having diagnostic value but they are nonspecific and have not gained wide acceptance as definite criteria of myocardial ischemia. These measurements, however, can be used in conjunction with other electrocardiographic parameters to further improve the diagnostic yield of the exercise test.

Septal Q waves are normally present and are most prominent in V5. It has been noted that the septal Q wave increases in amplitude during exercise.<sup>15</sup> Failure of the septal Q wave to increase implies abnormal septal activation, may be a diagnostic marker of ischemia of the septum,<sup>16</sup> and strongly suggests proximal left anterior descending CAD.<sup>17</sup> Other investigators have not found the septal Q waves to be useful, and

have found them to have less sensitivity and less specificity than ST depression.<sup>18</sup>

It has been observed that an increase or no change in R amplitude in V5 immediately post-exercise when compared with baseline is indicative of myocardial ischemia.<sup>19</sup> This increase has been attributed to an increase in left ventricular volume during ischemia, although subsequent studies have failed to confirm this finding.<sup>20</sup>

The QT interval is corrected for heart rate (QTc) and the QX interval is measured from the beginning of the QRS complex to the point of crossing at the baseline of the ST segment. It was previously suggested that prolongation of the QTc interval<sup>21</sup> and the QX/QT ratio<sup>22</sup> were useful in identifying patients with coronary disease, although more recent studies show that the QTc criterion, as well as the QX/QT ratio, were no better than the ST criterion and were unreliable.<sup>18,23</sup>

It has been shown that correlation of the maximal progression of ST depression relative to heart rate increase is a more precise indicator of myocardial ischemia than ST depression alone. Elamin et al<sup>24</sup> correlated the angiographic findings with the maximal ST/Heart Rate (HR) slope in 206 patients and were able to discriminate thirty-eight patients without coronary disease from forty-nine patients with one-vessel disease, seventy-five patients with two-vessel disease, and forty-four patients with three-vessel disease with 100 percent accuracy. Although this measurement has not been corroborated by others,<sup>25</sup> a number of recent studies have shown that heart rate adjustment of ST segment depression measured as ST/HR slope or ST/HR Index can markedly improve the accuracy of the treadmill exercise ECG in the detection of CAD.<sup>26-28</sup> These observations need further validation.

In addition to the improved ECG criteria, several methods have been used to maximize the efficacy of the ECG in the detection of myocardial ischemia during exercise testing. These include the use of multiple lead systems, the availability of various exercise protocols in an attempt to intensify workloads and attain ischemic threshold, and the identification of various drugs and baseline ECG abnormalities that may interfere with the use of the ECG in the diagnosis of myocardial ischemia.

**Lead System.** The Task Force Report issued by the American College of Cardiology/American Heart Association suggests, with few exceptions, that a minimum of three ECG leads should be monitored and recorded<sup>29</sup> during exercise testing. Increasing the number of leads increases the sensitivity of the exercise test by 8 to 20 percent compared with a single lateral precordial lead.<sup>30</sup> Although the number of leads reported during exercise testing varied from three to more than one-hundred leads, only two of twenty-five patients were missed by a standard twelve-lead system compared with a ninety-three-lead body surface mapping.<sup>31</sup> Therefore, a conventional twelve-lead system or its modification is not only more convenient but should be adequate.<sup>30,32</sup> The three leads used for monitoring should represent an orthogonal XYZ sys-



tem that includes V5 or its equivalent since most of the ischemic changes are recorded in V5.<sup>33</sup> One must, however, be certain that the lead being monitored has sufficient R wave amplitude, since an R wave of less than 11 mm is rarely associated with ST depression, even in patients with multivessel disease.<sup>34</sup> Finally, good quality tracings are necessary at baseline or post-exercise, as well as during exercise testing, since 10 percent of patients with CAD will show ischemic ST depression only during exercise.<sup>35</sup>

**Maximizing Heart Rate Response.** Stress testing as a diagnostic test for CAD is dependent on increases in heart rate, blood pressure and left ventricular contractility during exercise. These factors will result in increased myocardial oxygen demand. If myocardial blood flow is compromised, increases in myocardial oxygen demand result in myocardial ischemia. For myocardial ischemia to be manifested, the exercise workload has to be sufficient. The availability of different exercise protocols for both treadmill and bicycle testing allows one to select the best protocol suitable to the age, physical condition, and capacity of the patient. These protocols can be modified to enable the patient to obtain the highest possible exercise workload. A reasonable estimate of an adequate exercise capacity is the attainment of at least 85 percent of the patient's predicted maximal heart rate, adjusted for age.

For patients unable to exercise with their lower extremities, arm exercise testing using an arm ergometer may substitute for treadmill or bicycle exercise testing. The peak workload accomplished by arm exercise testing is significantly less than that of leg exercise. Balady et al<sup>36</sup> compared treadmill testing and arm ergometry on thirty patients with CAD confirmed by coronary angiography. Although there was no difference in peak heart rate-blood pressure product with either test, ischemic ST depression occurred in 86 percent with leg exercise but in only 40 percent with arm exercise. Arm exercise, therefore, is a reasonable but not equivalent alternative to leg exercise testing in patients who cannot perform leg exercise.

Static exercise consisting of handgrip and weightlifting has an even lower workload compared with dynamic exercise. Wilke and her group<sup>37</sup> studied thirty patients with documented CAD comparing weight-carrying versus handgrip exercise testing. Weight-carrying resulted in greater myocardial oxygen demand with higher heart rate-blood pressure product compared with handgrip. None of the patients demonstrated ischemic responses to either handgrip or weight-carrying. In general, ischemic responses are less frequent with static exercise, even in combination with dynamic exercises.<sup>37</sup>

Finally, in order to attain an adequate heart rate-blood pressure product, it is important that the patient discontinue any medications that will prevent an adequate heart rate-blood pressure response, such as beta blockers and calcium entry blockers, before exercise testing. Abrupt withdrawal of beta blockers, however, could precipitate recurrence of anginal symptoms in

patients with CAD. It has been recommended by the American College of Cardiology/American Heart Association Task Force on Exercise Testing that initial diagnostic testing should be performed without discontinuing the drug.<sup>29</sup>

**Baseline ECG Abnormalities.** Since the ECG is the primary means by which myocardial ischemia is diagnosed, exercise testing in patients with baseline ECG abnormalities usually yields poor results. Patients in this category include those with intraventricular conduction delays, Wolff-Parkinson-White (WPW) syndrome, left ventricular hypertrophy, or those receiving digitalis.<sup>38</sup> Previous anterior myocardial infarction<sup>39</sup> and, in general, women more so than men, have shown limitations in the sensitivity and specificity of the ECG during exercise testing.<sup>40,41</sup> In these patients, the exercise test is usually combined with an imaging procedure such as thallium<sup>40</sup> or echo stress test<sup>41</sup> which yield better information. Other conditions including valvular diseases and mitral valve prolapse can also result in a false-positive exercise response.

**Patient Population.** The sensitivity, specificity, and predictive value of the stress test is highly dependent on the type of population being tested. If exercise testing is performed on a symptomatic population in an age group where coronary disease is prevalent, the predictive accuracy of the exercise test will be significantly higher. Fortuin and Weiss<sup>42</sup> conducted a survey of a symptomatic population involving approximately 1,500 patients; patients had an average sensitivity, average specificity, and predictive value of 65.9 percent, 92.3 percent, and 90.8 percent, respectively. This confirms the efficacy of the standard exercise test in diagnosing the presence of myocardial ischemia. On the other hand, when the exercise test is applied to a population of asymptomatic patients with a low prevalence of coronary disease, the predictive accuracy of the test is significantly limited and varies from 14 to 46 percent.<sup>43,44</sup> These divergent results obtained on two different populations are merely a reflection of the prevalence of the disease in the study populations; the high predictive accuracy reflects the high prevalence of the disease and the low predictive accuracy reflects the low prevalence of the disease in asymptomatic subjects.<sup>45</sup> This is an application of Bayes' theorem.

The exercise ECG, therefore, remains an effective procedure in the diagnosis of CAD with a reasonably good sensitivity and specificity if a symptomatic population with an intermediate or relatively high prevalence of CAD is tested, patients are able to exercise adequately, patients with baseline ECG abnormalities are excluded, and drugs altering the electrocardiographic and hemodynamic response to exercise are eliminated.

### Thallium-201 Stress Test

Thallium-201 exercise testing has been shown to be more accurate with a much higher sensitivity and specificity in detecting CAD than exercise ECG.<sup>46,47</sup>



This advantage involves all subsets of patients including those with electrocardiographic abnormalities, patients on digitalis and diuretics, and those with left ventricular hypertrophy and valvular abnormalities where false positive responses are common. Furthermore, unlike exercise-induced ST depression, thallium imaging can identify regional areas of perfusion abnormality and can, therefore, localize and identify the extent of coronary lesions. This information is extremely useful for patients with previous myocardial infarction and coronary artery bypass surgery, as well as those with multivessel disease who are undergoing coronary angioplasty.

Although the sensitivity of the electrocardiographic stress test has been shown to depend on the level and intensity of exercise,<sup>48</sup> the study by Esquivel et al<sup>49</sup> concluded that this was not the case with planar thallium-201 imaging. They evaluated 288 symptomatic patients with angiographically proven CAD and demonstrated that the level of effort during exercise testing did not appear to influence the overall thallium imaging results except in patients with one-vessel disease. They suggested that thallium-201 imaging should be added routinely for most symptomatic patients undergoing stress testing whose level of effort cannot be predicted before the exercise test. Iskandrian et al,<sup>50</sup> however, were unable to confirm the above findings in a larger series of 461 patients. Using single photon emission computed tomography (SPECT) with thallium-201 imaging, they noted that in patients who were unable to attain 85 percent of their maximal predicted heart rates because they could not exercise adequately, the tomographic thallium images showed perfusion defects in 52 percent, 84 percent, and 79 percent of patients with one, two or three-vessel disease, respectively. In contrast, perfusion defects occurred in 74 percent, 88 percent, and 98 percent of patients, respectively, who had a positive exercise test and were able to exercise adequately. Partial or complete redistribution images consistent with ischemia of patients with one, two, and three-vessel disease were seen in 35 percent, 58 percent, and 56 percent, respectively, of patients unable to exercise compared with 56 percent, 80 percent, and 88 percent, respectively, of patients who could exercise. They concluded that exercise SPECT thallium imaging is significantly better in patients with adequate exercise endpoints than in those with submaximal exercise endpoints. Young et al<sup>51</sup> noted that six of twenty-one patients (29 percent) who had poor exercise performance and had normal submaximal thallium-201 stress tests developed thallium redistribution with dipyridamole on subsequent testing. They concluded that a normal but submaximal exercise thallium test may miss patients with underlying coronary disease. The implication is that if a stress test turns out to be submaximal, the injection of thallium-201 during stress testing should be withheld and a dipyridamole study should be performed instead.

Submaximal heart rate responses are seen in patients unable to exercise and in patients on beta blockers or

calcium entry blockers such as verapamil and diltiazem. Martin et al<sup>52</sup> noted that beta blockers significantly decreased the sensitivity of the thallium treadmill exercise test. Of fifty-eight patients not on beta blockers, fifty-two had an abnormal thallium treadmill test with a sensitivity of 90 percent. In comparison, eighty-eight patients receiving beta blockers had a sensitivity of 76 percent. Fifty-nine percent of patients not on beta blockers achieved greater than 85 percent of their maximal predicted heart rate in contrast to 22 percent in the beta blocker group.

A decline in the sensitivity and specificity of exercise thallium imaging has been recently noted.<sup>53</sup> In earlier studies, the sensitivity and specificity varied from 80 to 90 percent.<sup>54,55</sup> More recent reports show a similar sensitivity of 70 to 85 percent but the specificity has fallen to 50 to 60 percent in both symptomatic and asymptomatic patients.<sup>50,56-57</sup> This low specificity of thallium stress testing has been explained as being due to patient selection. In earlier studies, patients underwent cardiac catheterization on the basis of symptoms and the presence of a positive electrocardiographic stress test. With the acceptance of stress thallium, patients with a negative thallium study are now excluded for catheterization.<sup>57</sup> With the exclusion of patients with a negative thallium study, the population has been skewed to one with a higher prevalence of disease which, according to Bayes' theorem, will decrease the specificity in that population.

Thallium stress testing will remain a useful procedure in the assessment of CAD. The use of SPECT thallium imaging<sup>58</sup> allows examination of the heart using tomographic slices with more improved sensitivity than planar thallium imaging. Recognition of imaging artifacts and the use of newer imaging radionuclides such as technetium-99m isonitrite (RP-30A) can provide better imaging quality than thallium-201 with the concomitant ability to assess left ventricular function using first pass radionuclide angiography.<sup>59</sup> More recently, it has been shown that a second injection of thallium given after redistribution images are completed improves the detection of ischemic myocardium, allowing differentiation between reversible ischemia from fixed perfusion defect.<sup>60</sup> All these innovations will certainly increase the diagnostic accuracy of thallium stress testing.

Although thallium stress testing continues to remain an important procedure in the screening and management of patients with CAD, routine use of thallium-201 imaging for diagnostic stress testing remains controversial. In patient groups with a high prevalence of coronary disease and typical presentation of angina but without associated abnormalities in the resting ECG, the sensitivity, specificity, accuracy, and predictive value of treadmill testing alone did not differ from that of thallium imaging.<sup>61</sup> Given limited resources and the expenses associated with thallium treadmill testing, which in our institution cost six to seven times that of regular stress tests, routine use of thallium exercise testing is not warranted.



## Exercise Radionuclide Ventriculography

Left ventricular performance during exercise testing can be evaluated with technetium-99m using either the first pass approach or equilibrium-gated blood pool scan. The rationale behind radionuclide ventriculography in the diagnosis of CAD is similar to that of exercise echocardiography (i.e., myocardial ischemia will result in wall motion abnormality which can then be detected using an imaging technique). The initial reports on the sensitivity of exercise radionuclide ventriculography for detection of CAD varied from 80 to 95 percent and are comparable with that of exercise thallium scintigraphy.<sup>62,63</sup> The specificity, however, is low and varies from 50 to 70 percent.<sup>64,65</sup> Similar to thallium exercise testing, a decrease in specificity reflecting the selection of patients being tested has been recently observed.<sup>65</sup> Radionuclide ventriculography has the same diagnostic endpoint as echocardiographic stress testing (i.e., the manifestation of regional wall motion abnormalities and assessment of global left ventricular function). Unlike echocardiography however, the tomographic views used in the evaluation of left ventricular function using radionuclide ventriculography are limited since several cardiac cycles are necessary to obtain an image and multiple projections cannot be performed during exercise. This is in contrast to the resting nuclear cardiac blood pool study in which multiple projections are readily available for wall motion analysis. Furthermore, patients undergoing radionuclide ventriculography can exercise using a stationary bicycle but not a treadmill. This is important to consider especially in patients capable of walking on the treadmill since a number of studies have shown that American subjects are more likely to reach peak exercise capacity on the treadmill than on the bicycle.<sup>66</sup> These differences may explain the slightly greater sensitivity of exercise echocardiography compared with radionuclide ventriculography, although the specificity is similar. However, radionuclide angiography can be used in virtually all patients, whereas the success rate of two dimensional echocardiography is less, ranging from 90 to 95 percent using online digital acquisition.<sup>67</sup>

## Stress Echocardiography

With the availability of more sophisticated computer techniques, including the use of online digitized two-dimensional images that can be displayed in quad-screen, there has been a resurgence of interest in the use of exercise echocardiography for the detection of CAD. Side-by-side comparison of pre- and postexercise echocardiograms can be performed; this was not technically possible using a standard video format. This has resulted in better resolution of the images and has eliminated respiratory artifacts by being able to select and display a single cardiac cycle of the best possible quality using a continuous loop. Unlike earlier investigations using the m-mode technique, two-

dimensional imaging allows the evaluation of regional as well as global left ventricular function, and can also provide information about valvular abnormalities, specific chamber enlargement, wall thickening, and pericardial involvement. This makes echocardiographic stress testing unique in the evaluation of patients with suspected CAD. The baseline echocardiogram can provide information (e.g., idiopathic hypertrophic subaortic stenosis, mitral valve prolapse, pericarditis, left ventricular hypertrophy) that would otherwise require additional testing in a patient with chest pain syndrome. Furthermore, stress echocardiography is a cost-effective imaging procedure -- less than half the price of thallium imaging in our institution. It is also noninvasive and does not require injection of pharmaceuticals. Unlike thallium and radionuclide ventriculography, it is devoid of the effects of ionizing radiation and the problems associated with its disposal. With the addition of the Doppler technique, it has become possible to obtain information on valvular competence and flow velocities for evaluation of systolic and diastolic left ventricular function.

Similar to radionuclide ventriculography, stress echocardiography relies on regional wall motion abnormalities as a marker for myocardial ischemia. This concept is based on experimental animal observations that wall motion abnormalities precede ECG changes following the onset of myocardial ischemia.<sup>68</sup> Clinical confirmation was subsequently obtained in patients with angina pectoris who were undergoing exercise testing.<sup>69</sup> Studies have shown that the sensitivity of the echo stress test is superior to exercise ECG<sup>70</sup> especially in the presence of single vessel disease.<sup>71</sup> The diagnostic accuracy of the echocardiogram is similar to that of thallium scintigraphy with an overall sensitivity of 80 to 95 percent and specificity of 85 to 90 percent,<sup>67</sup> whether acquisition of images is performed immediately after a treadmill exercise test or during peak exercise using a bicycle ergometer.<sup>72</sup> Unfortunately, there remains a small group of patients who cannot be imaged echocardiographically, in contrast to thallium and radionuclide ventriculography which can be performed in virtually all patients.

## Alternatives to Exercise Testing in Patients Unable to Exercise

Exercise testing may be clinically indicated in certain patients unable to exercise because of neurologic or orthopedic problems, or because of other debilitating medical conditions. Additionally, a number of patients may be able to exercise but cannot perform adequate levels for a variety of reasons. Alternatives to exercise testing include cardiac pacing and the use of pharmacologic agents with or without cardiac imaging.

## Cardiac Pacing

Atrial pacing requires the insertion of a pacemaker electrode into the right atrium. External pacing can be effected at varying heart rates until the target heart rate



is achieved or until symptoms or ECG changes of myocardial ischemia occur. A less invasive technique involves the transesophageal insertion of a pacing catheter which is swallowed by the patient as a pill electrode and positioned behind the left atrium by electrocardiographic monitoring. The presence of atrial arrhythmias such as atrial flutter or fibrillation and the development of atrioventricular (AV) nodal block during atrial pacing precludes the use of the pacing test although the latter problem could be circumvented using atropine.<sup>73</sup>

The atrial pacing test is associated with a lower sensitivity and specificity compared with a standard dynamic exercise test.<sup>74-76</sup> This is probably because hemodynamic response during atrial pacing is characterized by less catecholamine release compared with dynamic exercise resulting in little change in blood pressure and less myocardial consumption of oxygen. However, Heller and his co-workers<sup>77</sup> reported a sensitivity of 94 percent and a specificity of 83 percent among twenty-two patients studied with atrial pacing. They believe that the low sensitivity and specificity reported in the literature are due to the technical and methodological performance of the test. They noted that previous studies used single channel ECG recorders instead of using multiple leads with V5 during atrial pacing; this could have reduced the diagnostic accuracy of the test. They also suggested that chest pain should not be an endpoint for the termination of pacing since chest pain is not a reliable indicator of CAD.<sup>74,75</sup> Chest pain could be minimized by pacing at 85 percent of the maximal predicted heart rate instead of pacing to 180 or more beats per minute (bpm) which results in a number of false positive responses. Stratman and Kennedy<sup>78</sup> feel that pacing to peak rates of 85 to 100 percent of age-predicted heart rate or 170 bpm, whichever is lower, appears to give the most reasonable balance between sensitivity and specificity.

Atrial pacing is usually combined with an imaging test such as thallium scintigraphy,<sup>79</sup> echocardiography,<sup>80</sup> or radionuclide ventriculography.<sup>81</sup> The addition of an imaging procedure has been shown to increase the sensitivity and specificity of atrial pacing in these studies. Furthermore, with the use of imaging, ventricular pacing (using external chest wall stimulation<sup>82</sup> or permanently implanted atrial/ventricular programmable pacemakers) can be performed which would not be technically possible using ECG alone.

Since the test is invasive or semi-invasive with a relatively low sensitivity and specificity, atrial pacing has not been used as extensively as the other available modalities of exercise testing.

### Pharmacologic Stress Testing

A variety of agents are presently used for pharmacologic stress testing. The most common are the vasodilators consisting of dipyridamole, papaverine hydrochloride and, more recently, adenosine and the inotropic agents consisting of dobutamine, dopamine, and isuprel.

### Dipyridamole

Experience with intravenous dipyridamole has been the most extensive compared to the other available pharmacologic agents. Dipyridamole is available in oral form as a prescription drug. The intravenous form is not commercially available and is currently classified as an investigational agent.\* The dipyridamole test can be given orally or intravenously. The patient should fast for approximately three hours before the test and avoid tea, coffee, and cola since xanthine can attenuate the effects of dipyridamole. Likewise, theophylline-containing medications should be discontinued. The oral dose is given as a single 200-400 mg dose. Absorption is slow and requires a longer monitoring period than intravenous (IV) dipyridamole. Because of its variable absorption, accurate timing for the injection of thallium (which should be at peak blood levels) is uncertain; thus the IV dose of dipyridamole is preferred.

Dipyridamole is a potent coronary vasodilator when given intravenously or orally. It increases endogenous adenosine concentration by inactivating adenosine deaminase and by blocking cellular uptake of adenosine.

Accumulation of adenosine results in coronary vasodilatation with an increase in coronary blood flow to approximately three to five times baseline.<sup>83,84</sup> The overperfusion of normal areas with reduced flow to areas with stenosis results in a "steal" phenomenon. Thallium uptake is enhanced in overperfused areas and is diminished distal to the stenosis where coronary perfusion pressure is reduced and shows as a regional perfusion defect during thallium imaging.<sup>85</sup> The perfusion abnormality is not necessarily accompanied by symptoms or ECG changes since no significant increases in myocardial oxygen consumption are present.<sup>86</sup> That these perfusion abnormalities represent myocardial ischemia has been corroborated by several echocardiographic studies<sup>87,88</sup> in which the wall motion abnormalities coincided with perfusion defects. This makes thallium imaging well-suited for dipyridamole testing since the perfusion abnormalities occur earlier and are independent of the presence of myocardial ischemia. Using a standard dose of 0.56 mg/kg dipyridamole given intravenously over four minutes (low dose), thallium imaging has a sensitivity of 70 to 80 percent compared with dipyridamole echocardiography which has a lower sensitivity of 50 to 60 percent.<sup>89,90</sup> Increasing the dose of dipyridamole to 0.84 mg/kg of body weight over ten minutes (high dose) further increases the sensitivity of the echocardiogram<sup>91</sup> to become comparable with that of thallium, although no apparent increase in sensitivity of thallium imaging could be demonstrated at this higher dose level.<sup>83,92</sup> Thus, dipyridamole echocardiography and dipyridamole thallium stress tests have comparable sensitivities using different doses.

The mechanism for this lack of increased sensitivity

\* Editor's Note: Since submission of this article, intravenous dipyridamole has been approved by the FDA for stress testing.



from thallium using higher doses of dipyridamole appears to be the difference in the diagnostic endpoint for thallium compared with that of echocardiographic stress testing. The thallium dipyridamole test is based on its ability to detect perfusion abnormalities. Increasing the dose of dipyridamole does not significantly increase the occurrence of regional perfusion abnormalities already present at low doses. Instead, higher doses of dipyridamole cause further hemodynamic alterations including a slight increase in myocardial oxygen demand, thereby increasing the ischemic potential.<sup>92</sup> This is usually accompanied by symptoms of angina and by ECG abnormalities. Echocardiography, radionuclide angiography, or other procedures using regional wall motion as a marker for myocardial ischemia will, therefore, have a higher sensitivity with higher doses of dipyridamole. This higher dose of dipyridamole is apparently well-tolerated without loss in specificity and with no apparent increase in risk to the patient.<sup>91</sup>

Several studies have shown that the sensitivity, specificity, and predictive accuracy of dipyridamole thallium for detection of CAD is comparable with that of dynamic exercise testing.<sup>93,94</sup> Since the sensitivity of thallium exercise testing is dependent on an adequate exercise level and is relatively poor in patients who cannot achieve at least 85 percent of target heart rates,<sup>50,51</sup> dipyridamole thallium stress testing provides a better alternative for this group of patients. A recent study has shown that dipyridamole thallium stress testing can be safely performed on post-myocardial infarction patients receiving thrombolytic therapy and that thallium tomography identified more patients with residual ischemia than post-myocardial infarction exercise treadmill tests (74 percent to 28 percent, respectively).<sup>95</sup> Furthermore, there is clinical information that the addition of exercise<sup>96</sup> or handgrip<sup>97</sup> to intravenous infusion of dipyridamole improves the diagnostic accuracy of the test over dipyridamole alone, and that the diagnostic accuracy of the test is not affected by propranolol therapy.<sup>93</sup>

**Electrocardiographic Testing.** The ECG during dipyridamole testing has very low sensitivity and varies from 8 to 62 percent.<sup>92</sup> The higher sensitivity is seen with higher doses of dipyridamole and is comparable to that of dynamic ECG exercise testing. Because of this low diagnostic yield, dipyridamole testing should be combined with an imaging procedure to improve its diagnostic accuracy, even among patients without baseline ECG abnormalities. Combining dipyridamole with low level treadmill exercise testing has been shown to be safe with a higher incidence of ischemic ECG abnormalities compared with dipyridamole alone.<sup>96</sup>

**Dipyridamole Echocardiography.** Using the standard dose of dipyridamole (low dose), echocardiography has a lower diagnostic yield than thallium with a sensitivity of 50 to 60 percent for echocardiography<sup>89,90</sup> and 70 to 80 percent for thallium. Increasing the dose of dipyridamole (high dose) increases the sensitivity of echocardiography to 74 percent,<sup>91</sup> becoming com-

parable with that of thallium. This is due to the difference in diagnostic endpoints between these two tests; thallium scintigraphy can detect perfusion abnormalities before myocardial ischemia manifests. Both echocardiographic and thallium tests have excellent concordance in the baseline wall motion abnormality identified by echocardiography to the fixed perfusion defect identified by thallium scintigraphy, and the onset of new wall motion abnormality during exercise to the location of reversible ischemia during reperfusion.<sup>87</sup>

Dipyridamole echocardiography has been combined with exercise (dipyridamole exercise-echocardiography) in an attempt to further increase the diagnostic accuracy of the dipyridamole echocardiography test.<sup>97</sup> Theoretically, the increased myocardial oxygen demand brought about by exercise can potentiate the reduction in myocardial oxygen supply due to maldistribution in blood flow caused by dipyridamole; combining the two effects could synergistically result in a more accurate test. In one study,<sup>97</sup> twenty of twenty-four patients (88 percent) with CAD were identified as positive with echocardiography and ten of twenty-four (42 percent) by ECG. The specificity was eighteen of nineteen for echocardiography and nineteen of nineteen for ECG. What is significant is that these patients had previously failed a high-dose dipyridamole echocardiography test before they were enrolled in a combined dipyridamole exercise-echocardiographic study. Whether dipyridamole testing in combination with exercise will be safe to perform, especially in patients with CAD, remains to be verified. Further confirmation of these results is needed to define the usefulness of this combined procedure.

Between 1978 and 1985, the safety of intravenous dipyridamole thallium was reviewed on 3,911 thallium-imaging patients collected from sixty-four investigators. There were two deaths because of myocardial infarctions, two nonfatal myocardial infarctions, and six cases of bronchospasm. Chest pain occurred in 19.7 percent, headache and dizziness in 12.2 percent and 11.8 percent, respectively, and ST-T changes in the electrocardiogram were seen in 7.5 percent. Use of parenteral aminophylline brought complete relief in 96.7 percent, with a dose ranging from 10 to 600 mg and averaging 137.4 mg. There is increased risk for bronchospasm in patients with a history of asthma and a potential for increased risk for ischemic events in patients with a history of unstable angina.<sup>98</sup>

### Adenosine Stress Testing

Recently, adenosine, a potent coronary vasodilator has become commercially available. It could substitute for dipyridamole which is also dependent on endogenous concentrations of adenosine to achieve coronary vasodilatation. Initial studies using adenosine SPECT thallium imaging and 2-D echocardiography compared to SPECT thallium<sup>99</sup> appear to support the role of adenosine as a new pharmacologic stress test for the detection of CAD.



## Beta Adrenergic Agents

Dobutamine, dopamine, and isoproterenol are beta-adrenergic agents that induce myocardial ischemia by increasing myocardial oxygen consumption. These beta agonists are very potent inotropic agents but have variable effects on heart rate, blood pressure, and coronary flow. With the availability of imaging, especially the dobutamine-echocardiography stress test, there has been a resurgence of interest in the use of these agents for pharmacologic stress testing. Dobutamine stress testing will be discussed as representative of this group.

**Dobutamine Stress Test.** Dobutamine is a beta-1 beta-2 adrenergic agent with alpha activity. It induces myocardial ischemia by its potent inotropic activity. Increases in heart rate and systolic blood pressure occur at higher doses.<sup>100</sup> In addition to increasing myocardial oxygen demand by increasing heart rate-blood pressure product, significant coronary dilatation with an increase in coronary flow can occur leading to "coronary steal" in patients with CAD.<sup>101</sup> Unlike dipyridamole however, dobutamine consistently increases myocardial oxygen consumption. The dose varies from 5 to 20 ug/kg/min,<sup>102</sup> although a wider dose range of 5 to 40 ug/kg/min<sup>103</sup> has also been used. Since the drug is administered by continuous intravenous infusion, the dose could be titrated and individualized according to patient tolerance, which is often influenced by the severity of the coronary disease. In a group of post-myocardial infarction patients, Mannerling et al<sup>104</sup> noted that the early onset of ST segment depression was associated with a lower tolerated dose of dobutamine. Segar et al<sup>105</sup> correlated the dose of dobutamine and heart rate on forty-four patients with a positive dobutamine echocardiographic test. They concluded that a low dose or a heart rate of less than 125 bpm indicated multivessel disease or severe single vessel disease, and that those having heart rates greater than 125 bpm had moderate disease or had collateral flow.

The dobutamine stress test, in combination with an imaging procedure such as echocardiography or thallium, surpasses the efficacy of the ECG when used alone in diagnosing CAD. Mason et al<sup>102</sup> studied twenty-four patients and compared the ST segment response to exercise testing with that of dobutamine infusion. The sensitivity and specificity of ST depression during exercise testing was 60 percent and 63 percent, respectively, and during dobutamine infusion, 57 percent and 87 percent, respectively. Thallium scintigraphy which was also obtained during dobutamine infusion detected reversible ischemia in fifteen of sixteen patients with CAD (sensitivity, 90 percent) and one of eight controls (specificity, 87 percent). Thallium scintigraphy, therefore, significantly improved the sensitivity of dobutamine stress testing in the diagnosis of CAD.

Using echocardiography as an imaging procedure, Berthe et al<sup>88</sup> evaluated the safety and efficacy of

dobutamine stress testing on thirty patients five to ten days post-myocardial infarction, and concluded that dobutamine stress testing was well-tolerated and that the accuracy of stress testing and 2-D echocardiography was higher than that of exercise ECG (87 percent for echocardiography and 59 percent for ECG). Palac et al<sup>103</sup> also studied sixteen patients using 2-D echocardiography and concluded that the sensitivity and specificity of the dobutamine stress test using 2-D echocardiography were equal to that of 2-D echocardiographic dynamic exercise testing.

## Conclusion

Stress testing remains an important and useful procedure in the diagnosis and evaluation of patients with CAD. Various modalities of stress testing are currently available for a diverse group of patients including those who are able to perform dynamic exercise, those who can exercise but are unable to attain adequate workloads, those who are unable to exercise with their lower extremities, and those who cannot perform any exercise for a variety of medical and noncardiac reasons.

Dynamic stress testing remains the simplest and most effective procedure for most patients who can exercise adequately. If applied to an appropriate patient group it has almost the same diagnostic accuracy as any imaging stress test. The addition of an imaging stress test consisting of thallium-201, radionuclide ventriculography, and echocardiography increases the sensitivity, specificity, and predictive accuracy of the exercise stress test, especially among women patients and those with baseline ECG abnormalities, valvular diseases or left ventricular hypertrophy, as well as patients on digitalis. However, the diagnostic accuracy of these imaging tests is dependent on the ability of the patient to perform an adequate level of exercise. For patients unable to exercise with their lower extremities, the use of a bicycle arm ergometer is a reasonable alternative but not a substitute for leg exercises. Isometric or static exercises such as handgrip and weightlifting are completely unreliable if used as a diagnostic test for CAD. Cardiac pacing remains an option for these patients where pharmacologic stress testing may not be readily available. Pharmacologic stress testing combined with imaging is currently emerging as the most important and useful alternative to dynamic stress testing. Since the diagnostic accuracy of these tests equals that of a patient who can perform an adequate dynamic stress test, pharmacologic stress testing has opened up a new population of patients who were previously unable to be tested because of a variety of medical problems. Of the pharmacologic agents currently used, dipyridamole stands out as a unique agent since perfusion abnormalities can be detected by thallium imaging without a significant increase in myocardial oxygen demand. Preliminary studies with adenosine, a newly available pharmacologic agent, seem to share the same diagnostic accuracy of dipyridamole. Of the different imaging modalities available, thallium scintigraphy is



the most sensitive when flow disturbance is a diagnostic endpoint and is, therefore, best combined with dipyridamole testing. Echocardiography stands out as a very cost-effective procedure, sharing the same potential when higher doses of dipyridamole are used or when dobutamine is the pharmacologic agent of choice.<sup>106</sup>

## References

1. Riseman JEF, Wallen J, Brown M. The electrocardiogram during attacks of angina pectoris: Its characteristics and diagnostic significance. *Am Heart J* 1940; 19:683.
2. Stuart Jr RJ, Ellestad MH. Upsloping ST segments in exercise stress testing. Six year follow-up study of 438 patients and correlation with 248 angiograms. *Am J Cardiol* 1976; 37:19-22.
3. Runeke RD, Ascoop CA, Talmon JL. Clinical significance of upsloping ST segments in exercise electrocardiography. *Circulation* 1980; 61:671-8.
4. McHenry PL, Phillips JF, Knoebel SB. Correlation of computer quantitated treadmill exercise electrocardiograms with arteriographic location of coronary artery disease. *Am J Cardiol* 1972; 30:747-52.
5. Ellestad MH. ECG patterns and their significance. In: *Stress Testing, Principles and Practice*. Edition 3. Philadelphia: FA Davis Company. 1986: 233-5.
6. Nosratian FJ, Froelicher VF. ST elevation during exercise testing. *Am J Cardiol* 1989; 63:986-8.
7. Dunn RF, Bailey IK, Roger W, Kelley DT. Exercise-induced ST segment elevation correlation of thallium 201 myocardial perfusion scanning and coronary arteriography. *Circulation* 1980; 61:989-99.
8. Specchia G, de Servi S, Falcone C, Angoli L, Mussini A, Bramucci E et al. Significance of exercise-induced ST segment elevation in patients without myocardial infarction. *Circulation* 1981; 63:46-53.
9. Fox RM, Hakki AH, Iskandrian AS. Relation between electrocardiographic and scintigraphic location of myocardial ischemia during exercise in one-vessel coronary artery disease. *Am J Cardiol* 1984; 53:1529-31.
10. Mark DB, Hlatky MA, Lee KL, Harrell FE, Califf RM, Pryor DB. Localizing coronary artery obstructions with the exercise treadmill test. *Ann Intern Med* 1987; 106:53-5.
11. Dunn RF, Freedman B, Kelly DT, Bailey IK, McLaughlin A. Exercise induced ST elevation in leads V1 or aVL. A predictor of anterior myocardial ischemia and left anterior descending coronary artery disease. *Circulation* 1981; 63:1357-69.
12. Chahine RA, Raizner AE, Ishimori T. The clinical significance of exercise induced ST elevation. *Circulation* 1976; 54:209-18.
13. Sriwatanakom S, Tizon AR, Zubritzky SA, Blobner CG, Rice M, Duffy FC, Lanna EF. ST segment elevation during exercise: Electrocardiographic and arteriographic correlation in 38 patients. *Am J Cardiol* 1980; 45:762-8.
14. Gerson MC, Phillis JF, Morris SN, McHenry PL. Exercise-induced U wave inversion as a marker of stenosis of the left anterior descending coronary artery. *Circulation* 1979; 60:1014-20.
15. Bruce R, Mazarella J, Jorden J, Green E. Quantitation of QRS and ST segment responses to exercise. *Am Heart J* 1966; 71:455-66.
16. Morales-Ballejo H, Greenberg PS, Ellestad MH, Bible M. Septal Q wave in exercise testing: Angiographic correlation. *Am J Cardiol* 1981; 48:247-51.
17. Nohara R, Kambara H, Suzuki Y, Tamaki S, Kadota K et al. Septal Q wave in exercise testing: Evaluation by single photon emission computed tomography. *Am J Cardiol* 1985; 55:905-9.
18. Egloff C, Merola P, Schiavon C, Schiavinato ML, Modena F et al. Sensitivity, specificity and predictive accuracy of Q wave, QX/QT ratio, QTc interval and ST depression during exercise testing in men with coronary artery disease. *Am J Cardiol* 1987; 60:1006-8.
19. Bnoris PE, Greenberg PS, Castellanet MJ, Ellestad MH. Significance of changes in R wave amplitude during treadmill stress testing. Angiographic correlation. *Am J Cardiol* 1978; 41:846-51.
20. Battler A, Froelicher V, Slutsky R, Ashburn W. Relationship of QRS amplitude changes during exercise to left ventricular function and volumes and the diagnosis of coronary artery disease. *Circulation* 1979; 60:1004-13.
21. Yu PNG, Soffer A. Studies of electrocardiographic changes during exercise (modified double two-step test). *Circulation* 1952; 6:183.
22. Master AM, Rosenfeld I. Criteria for the clinical application of the "two-step exercise test." *JAMA* 1961; 178:283-9.
23. Greenberg PS, Friscia DA, Ellestad MH. Predictive accuracy of QX/QT ratio, QTc interval, ST depression and R wave amplitude during stress testing. *Am J Cardiol* 1979; 44:18-23.
24. Elamin MS, Boyle R, Kardash MM, Smith DR, Stoker JB, Whitaker W, Asgmary D, Linden RJ. Accurate detection of coronary heart disease by new exercise test. *Br Heart J* 1982; 48:311-20.
25. Quyyumi AA, Raphael MJ, Wright C, Bealing L, Fox KM. Inability of the ST segment/heart rate slope to predict accurately the severity of coronary artery disease. *Br Heart J* 1984; 51:395-8.
26. Kligfield P, Okin PM, Ameisen O, Wallis J, Borer JS. Correlation of the exercise ST/HR slope with anatomic and radionuclide cineangiographic findings in stable angina pectoris. *Am J Cardiol* 1985; 56:418-21.
27. Kligfield P, Ameisen O, Okin PM. Heart rate adjustment of ST segment depression for improved detection of coronary artery disease. *Circulation* 1989; 79:245-55.
28. Okin PM, Kligfield P, Milner MR, Goldstein SA, Lindsay Jr J. Heart rate adjustment of ST segment depression for reduction of false positive electrocardiographic responses to exercise in asymptomatic men screened for coronary artery disease. *Am J Cardiol* 1988; 62:1043-47.
29. Schlant R, Fisch C. Guidelines for exercise testing. A report of the American College of Cardiology/American Heart Association task force on assessment of cardiovascular procedures (Subcommittee on exercise testing). *J Am Coll Cardiol* 1986; 8:725-38.
30. Chaitman BR, Bourassa MG, Wagniar P, Corbara F, Ferguson RJ. Improved efficiency of treadmill exercise testing using a multiple lead ECG system and basic hemodynamic exercise response. *Circulation* 1978; 57:71-9.
31. Ikeda K, Kawashima S, Kubota I et al. Non-invasive detection of coronary artery disease by body surface electrocardiographic mapping after dipyridamole infusion. *J Electrocardiol* 1986; 19:213-23.
32. Mason RE, Likar I, Biern RO, Ross RS. Multiple lead exercise electrocardiography. *Circulation* 1967; 36:517-25.
33. Blackburn H, Katigbak R, Okamoto N, Rautaharju P, Mitchell PL, Kerkhof AC. What electrocardiographic leads to take after exercise? *Am Heart J* 1963; 67:184-92.
34. Hakki AH, Iskandrian AS, Kutalek S, Hare T, Sokoloff NM. R wave amplitude: A new determinant of failure of patients with coronary heart disease to manifest ST segment depression during exercise. *J Am Coll Cardiol* 1984; 3:1155-60.
35. Faris JV, McHenry PL, Morris SN. Concepts and applications of treadmill exercise testing and the exercise ECG. *Am Heart J* 1978; 95:102-14.
36. Balady GJ, Weiner DA, McCabe CH, Ryan TJ. Value of arm exercise testing in detecting coronary artery disease. *Am J Cardiol* 1985; 55:37-9.
37. Wilke NA, Sheldahl LM, Levandoski SG, Hoffman MD, Tristani FE. Weight carrying versus handgrip exercise testing in men with coronary artery disease. *Am J Cardiol* 1989; 64:736-40.
38. Meyers DG, Bendon KA, Hankins JH, Stratbucker RA. The effect of baseline electrocardiographic abnormalities on the diagnostic accuracy of exercise-induced ST segment changes. *Am Heart J* 1990; 119:272-6.
39. Castellanet M, Greenberg PS, Ellestad MH. Comparison of ST segment changes on exercise testing of angiographic findings in patients with prior myocardial infarction. *Am J Cardiol* 1978; 42:24-35.
40. Friedman TD, Greene AC, Iskandrian AS, Hakki A-H, Kanasa SA, Segal BL. Exercise thallium-201 myocardial scintigraphy in women: Correlation with coronary arteriogram. *Am J Cardiol* 1982; 49:1632-47.
41. Sawada SG, Ryan T, Fineberg NS, Armstrong WF, Judson WE, McHenry DC, Feigenbaum H. Exercise echocardiographic detection of coronary disease in women. *J Am Coll Cardiol* 1989; 14:1440-47.
42. Fortuin NJ, Weiss JL. Exercise stress testing. *Circulation* 1977; 56:699-712.
43. Froelicher VF, Thomas M, Pillow C, Lancaster MC. An epidemiological study of asymptomatic men screened with exercise testing for coronary heart disease. *Am J Cardiol* 1974; 34:770-6.



44. Cumming GR, Samm J, Borysyk L, Kich L. Electrocardiographic changes during exercise in asymptomatic men. Three year follow-up. *Can Med Assoc J* 1975; 112:578.
45. Redwood DR, Borer JS, Epstein SE. Whither the ST segment during exercise? *Circulation* 1976; 54:703-6.
46. Iskandrian AS, Segal BL. Value of exercise thallium-201 imaging in patients with diagnostic and non-diagnostic exercise electrocardiograms. *Am J Cardiol* 1981; 48:233-8.
47. Kaul S, Newell JB, Chesler DA, Pohost GM, Okada RD, Guiney TE, Boucher CA. Value of computer analysis of exercise thallium images in the non-invasive detection of coronary artery disease. *JAMA* 1986; 255:508-11.
48. Cumming GR. Yield of ischemic exercise electrocardiograms in relation to exercise intensity in a normal population. *Br Heart J* 1972; 34:919-23.
49. Esquivel L, Pollock SG, Beller GA, Gibson RS, Watson DD, Kaul S. Effect of the degree of effort on the sensitivity of the exercise thallium-201 stress test in symptomatic coronary artery disease. *Am J Cardiol* 1989; 63:160-5.
50. Iskandrian AS, Heo J, Kong B, Lyons E. Effect of exercise level on the ability of thallium-201 tomographic imaging in detecting coronary artery disease: Analysis of 461 patients. *J Am Coll Cardiol* 1989; 14:1477-86.
51. Young, DZ, Guiney TE, Desko G, McKusick KA, Strauss HW, Okada RD, Boucher CA. Dipyridamole thallium imaging unmasks evidence of ischemia in patients with normal but submaximal exercise thallium test. (Abstract). *J Am Coll Cardiol* 1986; 7:5A.
52. Martin GJ, Henkin RE, Scanlon PJ. Beta blockers and the sensitivity of the thallium treadmill test. *Chest* 1977; 92:486-7.
53. Gould KL. How accurate is thallium exercise testing for the diagnosis of coronary artery disease? *J Am Coll Cardiol* 1989; 14:1487-90.
54. Ritchie JL, Trobaugh GB, Hamilton BW et al. Myocardial imaging with thallium-201 at post and during exercise. Comparison with coronary arteriography and resting and stress electrocardiography. *Circulation* 1977; 56:66-78.
55. Ritchie JL, Zaret BL, Strauss HW et al. Myocardial imaging with thallium-201: A multicenter study in patients with angina pectoris or acute myocardial infarction. *Am J Cardiol* 1978; 42:345-50.
56. DePasquale EE, Nody AC, Depuey EG et al. Quantitative rotational thallium-201 tomography for identifying and localizing coronary artery disease. *Circulation* 1987; 77:316-27.
57. Van Train KF, Berman DS, Garcia EV et al. Quantitative analysis of stress thallium-201 myocardial scintigrams: A multicenter trial. *J Nucl Med* 1986; 27:17-25.
58. Tamaki N, Yonekura Y, Mukai T et al. Stress thallium-201 trans-axial emission computed tomography: Quantitative versus qualitative analysis for evaluation of coronary artery disease. *J Am Coll Cardiol* 1984; 4:1213-21.
59. Iskandrian AS, Heo J, Kong B, Lyons E, Marsh S. Use of technetium-99m isonitrite (RP-30A) in assessing left ventricular perfusion and function at rest and during exercise in coronary artery disease and comparison with coronary arteriography and exercise thallium-201 SPECT imaging. *Am J Cardiol* 1989; 64:270-2.
60. Dilsizian V, Rocco TP, Freedman NMT, Leon MB, Bonow RO. Enhanced detection of ischemic but viable myocardium by the reinjection of thallium after stress-redistribution imaging. *N Engl J Med* 1990; 323:141-6.
61. Ong YS, Quaife MA, Dzinio BS, Emery JF, Kotlyarov EV, Forker AD. Clinical decision making with treadmill testing and thallium 201. *Am J Med* 1980; 69:31-8.
62. Jones RH, McEwan P, Newman GE et al. Accuracy of diagnosis of coronary artery disease by radionuclide measurement of left ventricular function during rest and exercise. *Circulation* 1981; 64:586-600.
63. Austin EH, Cobb FR, Coleman RE et al. Prospective evaluation of radionuclide angiocardiology for the diagnosis of coronary artery disease. *Am J Cardiol* 1982; 50:1212-16.
64. Christopher TD, Konstantinow G, Jones RH. Bayesian analysis of data from radionuclide angiocardiology for diagnosis of coronary artery disease. *Circulation* 1984; 69:64-77.
65. Rozanski A, Diamond GA, Berman D et al. The declining specificity of exercise radionuclide ventriculography. *N Engl J Med* 1983; 309:518-22.
66. Ellestad MH. Stress testing protocol. In: *Stress Testing, Principles and Practice*. Edition 3. Philadelphia: FA Davis Company. 1986: 161.
67. Crawford MH, Presti CF. Exercise echocardiographic testing. In: Hurst JW, ed. *The Heart*. New York: McGraw-Hill Information Services Co. 1990: 2035-39.
68. Battler A, Froelicher VF, Gallagher KP, Kemper WS, Ross Jr J. Dissociation between regional myocardial dysfunction and ECG changes during ischemia in the conscious dog. *Circulation* 1980; 62:734-44.
69. Sugishita Y, Koseki S, Matsuda M, Tamura T, Yamaguchi I, Ito I. Dissociation between regional myocardial dysfunction and ECG changes during myocardial ischemia induced by exercise in patients with angina pectoris. *Am Heart J* 1983; 106:1-7.
70. Armstrong WF, O'Donnell J, Dillon JC, McHenry PL, Morris SN, Feigenbaum H. Complementary value to two-dimensional exercise echocardiography to routine treadmill exercise testing. *Ann Intern Med* 1986; 105:829-35.
71. Ryan T, Vasey CG, Presti CF, O'Donnell JA, Feigenbaum H, Armstrong WF. Exercise echocardiography: Detection of coronary artery disease in patients with normal left ventricular wall motion at rest. *J Am Coll Cardiol* 1988; 11:993-9.
72. Presti CF, Armstrong WF, Feigenbaum H. Comparison of echocardiography at peak exercise and after bicycle exercise in evaluation of patients with known or suspected coronary artery disease. *J Am Soc Echo* 1988; 1:119-25.
73. Cokkinos DV, Katsaros S, Grivas P, Bakoulas G, Plessas ST, Voriadis F. Use of atropine for higher right atrial pacing rates. *Br Heart J* 1973; 35:720-8.
74. Keleman MH, Gillilan RE, Bouchard RJ, Heppner RL, Warbasse JR. Diagnosis of obstructive coronary disease by maximal exercise and atrial pacing. *Circulation* 1973; 48:1227-33.
75. Rios JC, Hurwitz LE. Electrocardiographic responses to atrial pacing and multistage treadmill exercise testing. Correlation with coronary anatomy. *Am J Cardiol* 1974; 34:661-6.
76. Robson RH, Pridie R, Fluck DC. Evaluation of rapid atrial pacing in diagnosis of coronary artery disease. *Br Heart J* 1976; 38:986-9.
77. Heller GV, Aroesty JM, McKay RG, Parker JA, Silverman KJ, Come PC, Grossman W. The pacing stress test: A reexamination of the relation between coronary artery disease and pacing-induced electrocardiographic changes. *Am J Cardiol* 1984; 54:50-5.
78. Stratman HG, Kennedy HL. Evaluation of coronary artery disease in the patient unable to exercise: Alternatives to exercise stress testing. *Am Heart J* 1989; 117:1344-65.
79. Heller GV, Aroesty JM, Parker JA, McKay RG, Silverman KJ, Als AV, Come PC, Kolodny GM, Grossman W. The pacing stress test: Thallium-201 myocardial imaging after atrial pacing. Diagnostic value in detecting coronary artery disease compared with exercise testing. *J Am Coll Cardiol* 1984; 3:1197-1204.
80. Chapman PD, Doyle TP, Troup PJ, Gross CM, Wann LS. Stress echocardiography with transesophageal atrial pacing: Preliminary report of a new method for detection of ischemic wall motion abnormalities. *Circulation* 1984; 70:445-50.
81. Tzivoni, Weiss AT, Solomon J, Warshow D, Rod J, Gotsman MS, Atlan H. Diagnosis of coronary artery disease by multigated radionuclide angiography during right atrial pacing. *Chest* 1981; 80:562-5.
82. Feldman MD, Gervino EL, Aroesty JM, Royal HD, Parker JA, Silverman KJ, Pasternak RC, Grossman W, Zoll PM, McKay R. A new stress testing technique, non-invasive transthoracic pacing tachycardia: Comparison to exercise stress testing (Abstract) *J Am Coll Cardiol* 1986; 7:223.
83. Gould KL, Westcott RJ, Albro PC, Hamilton GW. Non-invasive assessment of coronary stenoses by myocardial imaging during coronary vasodilatation II. Clinical methodology and feasibility. *Am J Cardiol* 1978; 41:279-87.
84. Albro PC, Gould KL, Westcott RJ, Hamilton GW, Ritchie JL, Williams DL. Non-invasive assessment of coronary stenoses by myocardial imaging during pharmacologic coronary vasodilatation III. Clinical trial. *Am J Cardiol* 1978; 42:751-60.
85. Gould KL. Noninvasive assessment of coronary stenosis by myocardial perfusion imaging during pharmacologic coronary vasodilatation I. Physiologic basis and experimental validation. *Am J Cardiol* 1978; 41:267-78.



86. Picano E, Lattanzi F, Distant A, L'Abbate A. Role of myocardial oxygen consumption in dipyridamole-induced ischemia. *Am Heart J* 1989; 118:314-9.

87. Maurer G, Nanda NC. Two-dimensional echocardiographic evaluation of exercise-induced left and right ventricular asynergy: Correlation with thallium scanning. *Am J Cardiol* 1981; 48:720-7.

88. Berthe C, Pieracol LA, Hiernaux M, Trotteur G, Lampereur P, Carlier J, Kulbertus HE. Predicting the extent and location of coronary artery disease in acute myocardial infarction by echocardiography during dobutamine infusion. *Am J Cardiol* 1986; 58:1167-72.

89. Picano E, Distant A, Masini M, Morales MA, Lattanzi F, L'Abbate A. Dipyridamole-echocardiography test in effort angina pectoris. *Am J Cardiol* 1985; 56:452-6.

90. Picano E, Morales MA, Distant A, Lattanzi F, Moscarelli E, Masini M, L'Abbate A. Dipyridamole-echocardiography test in angina at rest: Non-invasive assessment of coronary stenosis underlying spasm. *Am Heart J* 1986; 111:688-91.

91. Picano E, Lattanzi F, Masini M, Distant A, L'Abbate A. Comparison of the high-dose dipyridamole-echocardiography test and exercise two-dimensional echocardiography for diagnosis of coronary artery disease. *Am J Cardiol* 1987; 59:539-42.

92. Picano E, Lattanzi F, Masini M, Distant A. Dipyridamole-echocardiography: an alternative form of stress testing for coronary artery disease. In: Kerber RE, ed. *Echocardiography in Coronary Artery Disease*. Mount Kisco, New York: Futura Publishing Co. 1988; 135-63.

93. Leppo JA, Boucher CA, Okada RD, Newell JB, Strauss HW, Pohost GM. Serial thallium-201 myocardial imaging after dipyridamole infusion. Diagnostic utility in detecting coronary stenosis and relationship to regional wall motion. *Circulation* 1982; 66:649-57.

94. Ruddy TD, Dighero HR, Newell JB, Pohost GM, Strauss HW, Okada RD, Boucher CA. Quantitative analysis of dipyridamole-thallium images for the detection of coronary artery disease. *J Am Coll Cardiol* 1987; 10:142-9.

95. Jain A, Hicks RR, Frantz DM, Myers GH, Rowe MN. Comparison of early exercise treadmill test and oral dipyridamole thallium-201 tomography for the identification of jeopardized myocardium in patients receiving thrombolytic therapy for acute Q-wave myocardial infarction. *Am J Cardiol* 1990; 66:551-55.

96. Casale PN, Guiney TE, Strauss W, Boucher CA. Simultaneous low level treadmill exercise and intravenous dipyridamole stress thallium imaging. *Am J Cardiol* 1988; 62:799-802.

97. Picano E, Lattanzi F, Masini M, Distant A, L'Abbate A. Usefulness of the dipyridamole-exercise echocardiography test for diagnosis of coronary artery disease. *Am J Cardiol* 1988; 62:67-70.

98. Ranhosky A, Kempthorne-Rawson J. The safety of intravenous dipyridamole thallium myocardial perfusion imaging. *Circulation* 1990; 81:1205-09.

99. Trakhtenbroit AD, Cheirif J, Kleiman NS, Verani M et al. Intravenous adenosine echocardiography. A new pharmacologic stress test: Preliminary results and comparison with simultaneous thallium scintigraphy. (Abstract). *J Am Coll Cardiol* 1990; 234A.

100. Willerson JT, Hutton I, Watson JT, Platt MR, Templeton GH. Influence of dobutamine on regional myocardial blood flow and ventricular performance during acute and chronic myocardial ischemia in dogs. *Circulation* 1976; 53:828-93.

101. Meyer SC, Curry GC, Dowsky MS, Twieg, DB, Parkey RW, Willerson JT. Influence of dobutamine on hemodynamics and coronary blood flow in patients with and without coronary artery disease. *Am J Cardiol* 1976; 38:103-8.

102. Mason JR, Palac RT, Freeman ML, Virupannavar S, Loeb HS, Kaplan G, Gunnar RM. Thallium scintigraphy during dobutamine infusion: non-exercise-dependent screening test for coronary artery disease. *Am Heart J* 1984; 107:481-85.

103. Palac R, Quirke P, Pacold I, Stephanides L et al. Two dimensional echocardiography during dobutamine infusion: A non-exercise dependent method of evaluating patients with coronary disease. *J Am Coll Cardiol* 1983; 1:633.

104. Mannering D, Cripps T, Leech G et al. The dobutamine stress test as an alternative to exercise testing after acute myocardial infarction. *Br Heart J* 1988; 59:521-6.

105. Segar DS, Sawada SG, Brown SE, Ryan T, Armstrong WF, Feigenbaum H. Dobutamine stress echocardiography: Correlation of dose and quantitative angiography. (Abstract) *J Am Coll Cardiol* 1990; 15:234A.

106. Fung AY, Gallagher KP, Buda AJ. The physiologic basis of dobutamine as compared to dipyridamole stress interventions in the assessment of critical coronary stenosis. *Circulation* 1987; 76:943-51.

## Acknowledgment

My heartfelt gratitude to Ms. Judith Frank for her expert secretarial assistance.

## Luxury Homesites

### ABOUT VILLAGER

The Villager name stands for quality built homes and personalized service: use our architects or yours, build on your lot or ours. We can arrange financing, locate a lot for you, and can even sell your old house! So, compare what Villager offers.

### PIKESVILLE

HELMSLEY COURT LOT 18 - Level treed lot, your architect or ours. One of the last available lots in this prestigious neighborhood. Public water, sewer & gas. Ft. Garrison Elementary.

### CAVES VALLEY

HUNTINGTON - Large wooded lot on private drive overlooking new golf course. Excellent investment/superior well yield. Purchase lot or custom build with us.

### NEW

### HILLSTEAD

KNOLLCREST FARMS LOT 3 - Fully wooded, beautiful acre plus lot with 11 GPM well. Located at Falls Road and the Beltway for close-in easy access. Build in a neighborhood of million dollar homes. Custom home with lot from \$450,000.



The EURO/CLASSIC 1

Lots now also available at Huntspring in Ruxton and Worthington Park in Owings Mills.

**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

Brokers  
Protected



McDonogh Crossroads • 20 Crossroads Drive, Suite 113  
Owings Mills, MD • Day 363-0963 • Eve 602-0820

## Maryland Advertisers!

To advertise in Med Chi Publications contact:

**Network Publications**

**2701 N. Charles Street, Baltimore, MD 21218**

**301-235-0500 FAX 301-235-0689**



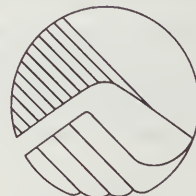
# Confidential

Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians with a confidential and nondisciplinary focus.

Addiction.....Marital/Family Conflicts.....Psychiatric Illness.....Organic Impairment.....Physical Handicap.....If these problems exist, we can help find the solutions. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families. The Committee is **NONDISCIPLINARY** and information is kept **CONFIDENTIAL**. If you, a colleague, or family member is in need of our services call:  
**(301) 539-0872**  
in Maryland **1-800-492-1056**  
Message line **(301) 727-0120** (24 hours a day, 7 days a week) Leave a message.

Medical  
and Chirurgical Faculty  
of Maryland



**Physician  
Rehabilitation  
Committee**

*HELPING IS OUR BUSINESS...If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation  
1211 Cathedral Street, Baltimore, Maryland 21201  
Please note on your donation: "Physician Rehab"*



---

# Drug Interference on Alpha-fetoprotein Assays

---

Phillip J. Goldstein MD, Shan G. Sundaram PhD  
and Saravanan Manimekalai PhD

---

From Sinai Hospital of Baltimore where Dr. Goldstein is Chief of Services and Chairman of the Department of Obstetrics and Gynecology; Dr. Sundaram is the Director of the Gynecologic Endocrine Laboratory; and Dr. Manimekalai is the Assistant Director of the Andrology Research Division.

---

*Due to the in vitro effects of drugs on human alpha-fetoprotein (AFP) assays, clinicians should review a patient's medication history before interpreting a low maternal serum AFP and proceeding with more tests.*

---

A patient with generalized absence seizures (petit mal) presented to prenatal care at eight weeks of gestational age. She was taking 600 mg of phenytoin each day. Her maternal serum alpha-fetoprotein (MSAFP) at sixteen weeks was reported as undetectable and subsequent fetal ultrasound revealed "probable unilateral renal agenesis with contralateral multicystic kidney disease." Pregnancy was terminated at eighteen weeks and the diagnosis was confirmed by fetal autopsy. In two earlier cases with similar diagnoses, MSAFP was reported to be within normal limits, although the decade old reports did not detail the normal range or the technique used to measure the MSAFP.<sup>1</sup> Therefore, we thought that the undetectably low MSAFP in our patient might be due to phenytoin or its metabolites reacting with MSAFP, rather than the prenatal pathology found in the fetus. The undetectably low MSAFP prompted us to investigate drug interactions with AFP.

MSAFP is generally quantified by radioimmunoassay (RIA) and enzyme immunoassay (EIA) techniques. Before clinical interpretation, the measured value is usually adjusted for variables such as maternal age, weight, and weeks of gestation. Elevated MSAFP has been established as an effective screening method for some congenital malformations, especially open neural tube defects.<sup>2</sup> Low MSAFP has been used for detecting aneuploidy, especially Down's syndrome.<sup>3,4</sup> Low MSAFP can be found in obese gravidas and in pregnant insulin-dependent diabetics, also prompting laboratory corrections.<sup>5,6</sup>

Most of the commercial RIA and EIA kits for the assay of MSAFP have been designed to be more precise at medium and high concentrations rather than low concentrations.<sup>7,8</sup> Using such kits to measure MSAFP to predict Down's syndrome may result in imprecise values. If drugs also artificially reduce MSAFP, additional false positive, Down's syndrome diagnoses may be made, leading to unnecessary intervention and anxiety in women with otherwise normal pregnancies. In this paper, we report our findings on the *in vitro* effects of drugs on human AFP assay.

## Materials and Methods

Pools of sera from pregnant women were analyzed in replicate by an RIA from Amersham Corporation, Arlington, IL and by an EIA from Hybritech Inc., San Diego, CA. A Micromedic Autogamma Counter/MACC Data Reduction System and a Hybritech Photon Immunoassay Analyzer were used for the RIA and EIA assays, respectively. AFP quantified in ng/ml was mathematically converted into IU/ml by using the equivalence of ng to IU ( $1.0 \text{ ng/ml} = 1.09 \text{ IU/ml}$  in the RIA and  $1.0 \text{ ng/ml} = 0.89 \text{ IU/ml}$  in the EIA). Pooled sera used for the experiments had mean AFP values varying from 30 to 75 IU/ml. Our most utilized pool had an AFP concentration of  $51.9 \pm 1.2 \text{ IU/ml}$  by RIA. The percent intra- and inter-assay coefficients of variations determined in our laboratory were 2 and 7 by RIA, and 4 and 10 by EIA, respectively, which were within the limits claimed by the kit manufacturers.

Forty-four commonly used medications in their pharmaceutical forms were evaluated. They were obtained from the hospital pharmacy and the amount of active drug in a pill, capsule, or vial was obtained from the literature (e.g., *Physicians' Desk Reference*, data sheet from the drug manufacturer). Active drugs in study medications are depicted in Table 1. The appropriate weight of the pill or the contents of the capsule or vial needed to give a 1 percent final concentration (by weight) of the active drug in the reaction mixture was calculated and added to aliquots of pooled sera. This calculated weight varied from medication to medication depending on the additional weight of the fillers or stabilizers present. In the initial experiment, we selected representative medications frequently used for a variety of common illnesses.

The medication was added to 5 ml of analyzed pooled sera (APS) in a volumetric flask to give a 1

percent active drug solution (experimental). Any increase in volume was noted. An equal volume of zero standard AFP diluent was added to 5 ml of APS without medication in another flask (control) for volume correction. Each experimental solution had its own control. It was necessary to use the diluent for volume correction because distilled water or a 4 percent albumin solution adversely affected the assay matrix and the assayable AFP in the diluted solutions.<sup>9</sup> The experimental and control solutions were incubated overnight at 37°C to maximize the drug-binding to AFP. The incubated solutions were assayed for AFP concentration by RIA technique.

To unify data, the concentration of AFP (in IU per ml) in the control was equated to 100 percent and the concentration in the experimental was expressed relative to the control value (i.e., percent of control). The experiments and assays were done in duplicate; the means of four values from each experimental and corresponding control were compared by paired t-test using a computer program from NCSS, Kaysville, UT.

Fifteen medications which lowered AFP by at least 10 percent from the corresponding control value were further evaluated. We measured the effect of each of these drugs on AFP at a peak drug blood level, rather than at 1 percent concentration. Peak drug blood level, usually in microgram per ml concentration (termed as 1x unit per ml) for each drug, was obtained from the literature. Since weighing of such small amounts for direct addition of the medication to APS to obtain a final 1x concentration of the active drug might be inaccurate, a concentrated solution (100x) of each medication in the diluent was made. The appropriate volume of that concentrated medication solution was added to 2 ml of APS to produce the experimental solution. An equal volume of diluent was added to the control solution for volume correction. The experimental and control sera were incubated overnight at 37°C and assayed for AFP concentration by RIA technique.

We also considered the possibility that the constituents of the medications might have significantly altered the RIA assay parameters such as the pH or ionic strength, thus producing the observed results. We developed a different protocol to rule out such a design flaw. We repeated the above experiment for six positive medications but assayed AFP using an EIA technique. The assay parameters for the RIA and EIA techniques are quite different from each other and the medication would not be expected to affect those parameters in a similar fashion. Additionally, we measured the pH but not the ionic strength of the drug-treated sera, recognizing that only a major alteration in ionic strength would change the pH.

## Results

Table 1 lists the different medications ( $n = 44$ ) initially screened in their pharmaceutical forms at 1 percent concentration. The medications that lowered the

**Table 1. Drugs Studied at 1 Percent Concentration**

1. Digoxin	23. Chlorpheniramine maleate
2. Metronidazole	24. Verapamil hydrochloride
3. Levothyroxine sodium	25. Aminophylline
4. Penicillin V Potassium	26. Sulfasalazine
5. Prednisone	27. Phenytin
6. Primidone	28. Chlorothiazide
7. Aspirin	29. Ultralente Iletin I (Zn)
8. Methyl dopa	30. Humulin L-1
9. Chloramphenicol	31. Lente-Iletin-I (Zn)
10. Cephalexin	32. Lente-Iletin-II (Pork, Zn)
11. Chlorpromazine HCl	33. Lente-Iletin-II (Beef, Zn)
12. Hydrocortisone	34. Humulin R
13. Erythromycin	35. Regular Iletin II (Pork)
14. Methimazole	36. Regular Iletin II (Beef)
15. Amoxicillin	37. Regular Iletin I
16. Tetracycline HCl	38. Insulin, Regular
17. Carbamazepine	39. Insulin, Regular (Pork)
18. Heparin	40. Insulin, Regular (Beef)
19. Acetaminophen	41. Humulin N NPH
20. Hydralazine	42. Protamine AN & Iletin I
21. Propranolol HCl	43. Protamine AN & Iletin II
22. Amoxicillin/clavulanate	44. Semilente Iletin I (Zn)

Analyzed pooled sera were incubated overnight at 37°C with 1 percent drug, and assayed for AFP by RIA



AFP from the corresponding control by at least 10 percent and that were further studied at 1x concentration are listed in Table 2. Of the fifteen medications, nine significantly reduced AFP. Four insulins lowered AFP by 14, 8, 8, and 8 percent. Erythromycin, propranolol, methyldopa, acetaminophen, and aspirin lowered AFP by 9, 10, 63, 18, and 19 percent, respectively (Table 2).

When AFP was measured by EIA, the pattern of reduction in assayable AFP was similar to that obtained by RIA technique (Table 3). For example, methyldopa reduced AFP by 54 percent using EIA and by 63 percent using RIA; aspirin reduced the AFP by 24 percent using EIA and 19 percent using RIA. The pH of the drug-treated sera was not significantly different from that of the control sera.

## Discussion

Merkatz and others have shown a high correlation between low MSAFP and fetal aneuploidy, especially Down's syndrome.<sup>3</sup> Cuckle and his associates have

even advocated routine screening to identify an additional 20 percent of infants so afflicted in the low-risk population of pregnant women under age 35.<sup>4</sup> Prior to proceeding to other tests such as amniocentesis, clinicians now routinely consider several factors that might affect MSAFP values. These modifying factors include accurate gestational age, maternal weight, age, race, multiple gestation, and diabetes. We suggest that the clinician should also consider the ability of an assay to measure low levels of AFP with accuracy and precision, and the use of prescription and over-the-counter medications by the patient for different ailments.

Our rationale for this suggestion is as follows: More than a dozen manufacturers sell kits to measure AFP. Polyclonal or monoclonal antibodies are used, and an EIA or RIA technique is employed for the assay. Each manufacturer explicitly states that assays from different manufacturers can vary due to differences in assay methods and reagent specificity, and that values obtained with different AFP assays cannot be used interchangeably. Furthermore, the kits have traditionally been designed specifically to measure AFP with accuracy and precision in the middle and upper range. This range is of importance in screening for neural tube defects. The low 0 to 20 IU/ml range of importance in screening for Down's syndrome is less reproducible in such test kits.

Our studies showed a significant impact on MSAFP concentration by two commonly used assay techniques in the presence of a variety of medications. If our observation that common prescription and over-the-counter medications cause a factitious reduction of AFP is valid, then this reduction would increase the frequency of extended evaluation of Down's syndrome. Therefore, it becomes important for the clinician to consider the medication history of the patient or to devise a way to overcome the effect of drugs on the AFP value.

Drug interference in clinical tests is not a unique observation.<sup>10</sup> Several drugs bind human AFP similar to drug interactions with albumin.<sup>11</sup> In any AFP assay, the antibody must recognize the antigenic site. The drugs bound to the sites may interfere with such recognition by simple conformational obstruction yielding lower results in the assay. Our results may be due to this effect.

It is conceivable that the observed lowering effects may be due to the fillers and stabilizers present in the drug formulations and not specifically the drugs themselves, or a combination of both. We designed our study based on the rationale that medications taken by patients have fillers and stabilizers and are not in pure chemical form. We attempted, in other experiments, to study the effect of the pure chemical form of drugs but our data were variable and erratic in replicate experiments. For example, the drugs had to be dissolved in ethanol or aqueous ethanol to obtain a homogeneous solution. However, we were then not sure of the extent of the solubility of the drug in the resulting drug-sera mixture or of its interactions with, or denaturation and precipitation of, serum proteins by

**Table 2. Drugs Affecting MSAFP at 1 Percent Concentration and at Peak Blood Levels**

Drug Added	AFP Assayed (As Percent Control)
Control (No drug)	100 %
Ultralente Iletin-I	86 ± 4*
Semilente Iletin-I (Zn)	92 ± 3*
Protamine Zn Iletin-II (Pork)	88 ± 7
NPH Iletin-II (Beef)	92 ± 5
Regular Iletin-I	92 ± 4*
Humulin R	92 ± 1*
Humulin N NPH	93 ± 12
Lente Iletin-II (Pork)	94 ± 4
Humulin L-1	92 ± 6
Sulfasalazine	89 ± 4
Erythromycin	91 ± 1*
Propranolol	90 ± 1*
Methyldopa	37 ± 28*
Acetaminophen	82 ± 4*
Aspirin	81 ± 4*

Assayed pooled sera with AFP were incubated overnight at 37°C with each drug at a final concentration of peak blood level (1x), AFP assayed and expressed as percent of control (no drug) value; the values are mean ± standard deviation of data from four values. \* = p value at 0.05 or less.

**Table 3. AFP Levels Measured by Radioimmunoassay and Enzyme Immunoassay**

	% Control	
	RIA	EIA
Control	100	
Aspirin	81 ± 3.6	76 ± 5.2
Acetaminophen	82 ± 0.9	84 ± 1.8
Erythromycin	91 ± 2.4	92 ± 3.1
Humulin R	92 ± 0.9	88 ± 2.1
Propranolol	90 ± 1.1	93 ± 4.3
Methyldopa	37 ± 28.2	46 ± 19.4

RIA = Radioimmunoassay; EIA = Enzyme immunoassay; experimental conditions were as in Table 2, except the incubated sera were assayed for AFP by both techniques



# THE MRI CENTER AT MARYLAND GENERAL HOSPITAL — A NEW RESOURCE FOR MARYLAND PHYSICIANS

Maryland General Hospital has installed a Picker Vista MRI 1.0 Telsa Scanner. This system permits high resolution, thin slice imaging capability and small fields of view, all with superior image quality.

Our System and services offer many benefits to area physicians...

- Convenient patient appointments.
- A dictaphone voice retrieval system which allows instant access to dictated MRI reports from any telephone including home, office or even car phones.
- A large magnet gantry and table to accommodate large or obese, and claustrophobic patients up to 300 lbs.
- Twenty-four hour or less report turn around.
- A financial counselor to facilitate MRI payments.
- Actual copy of study available to physician upon request.

The MRI Center at Maryland General Hospital  
827 Linden Avenue Baltimore, Maryland 21201  
301-225-8121



- EXTRA and the "Thermolds" shoes
- Accomodative, impression molded inlays, for proper weight distribution, made of PLASTIZOTE or PELITE
- Complete line of SPENCO products
- Custom MOLDED footwear as required
- Outside fitting in home or hospital
- Also—Complete prescription service, including many special purpose shoes and shoes suitable for brace attachment

## ZIMMERMANN'S SHOES

227 W. Saratoga St.  
Baltimore, MD 21201  
(301) 685-3665

Hours: 9 am—5 pm MTWTF  
Thursday til 7 pm

New Location:  
558G Ritchie Hwy.  
Severna Park, MD 21146  
(301) 554-1302

Hours: 10 am—6 pm MTWS  
Thursday & Friday til 8 pm

Charles E. Brown, Certified Pedorthist  
Member, Prescription Footwear Association

ethanol during subsequent incubations. In a different protocol, sodium salicylate instead of buffered aspirin was added to the serum, and the serum was analyzed with no significant change in the AFP assayed.<sup>12</sup> The lack of incubation and use of a metabolite form of the chemical instead of buffered aspirin might have produced the observed negative results in that study.

The pharmacologic form in which a drug is carried to the sites of utilization in the body is generally different from the pharmaceutical form in which it is administered. However, the commercial product with fillers and stabilizers is the form in which any medication is administered so their effects cannot be ignored. Considering the variety of compounds used as fillers and stabilizers in different pharmaceutical preparations, and the different active and inactive forms of metabolites known to be present in circulation for any given drug, it is impossible to study all of them or to pinpoint the one or more compounds that cause the reduction in AFP value in any assay. A correction for the effect of every known drug and its formulation on AFP by different assay kits would also be impossible. The ideal solution would be to instruct the patient to desist from medications, at least overnight, before giving blood for an MSAFP analysis.

In conclusion, we suggest that clinicians discuss the accuracy and precision of laboratory analysis with their laboratory when confronted with an abnormal MSAFP result. We also suggest that clinicians review the current medication history of the patient before interpreting a low MSAFP value and proceeding with more tests.

## References

1. Seller MJ, Berry AC. Amniotic fluid alpha-fetoprotein and fetal renal agenesis. Letter to editor. *Lancet* 1978; 1:660.
2. Brock DJ, Sutcliffe RG. Alpha-fetoprotein in the antenatal diagnosis of anencephaly and spina bifida. *Lancet* 1972; 2:197-9.
3. Merkatz IR, Nitowsky, HM, Macri JN, Johnson WE. An association between low maternal serum alpha-fetoprotein and fetal chromosomal abnormalities. *Am J Obstet Gynecol* 1984; 148:886-94.
4. Cuckle HS, Wald NJ, Lindenbaum RH. Maternal serum alpha-fetoprotein measurement: A screening test for Down syndrome. *Lancet* 1984; 1:926-9.
5. Wald NJ, Cuckle HS, Boreham J, Terzian E, Redman C. The effect of maternal weight on maternal serum alpha-fetoprotein level. *Br J Obstet Gynecol* 1981; 88:1094-98.
6. Wald NJ, Cuckle HS, Boreham J, Stirrat GM, Turnfull AC. Maternal serum alpha-fetoprotein and diabetes mellitus. *Br J Obstet Gynecol* 1979; 86:101-5.
7. Knight GJ, Palomaki GE, Haddow JE. Maternal serum alpha-fetoprotein: A problem with a test kit. *N Engl J Med* 1986; 314:516.
8. Turner RH, Bowden C. Maternal serum alpha-fetoprotein. Letter to editor. *N Engl J Med* 1986; 315:194.
9. Wu JT, Knight JA. *In vitro* stability of human alpha-fetoprotein. *Clin Chem* 1985; 31:1692-97.
10. Young DS, Pestaner LC, Gibberman V. Effects of drugs on clinical laboratory tests. *Clinical Chemistry* 1975; 21:1D-432D.
11. Hirano K, Watanabe Y, Adachi T, Ito Y, Sugiura M. Drug binding properties of human alpha-fetoprotein. *Biochem J* 1985; 231:189-91.
12. Distribution #42 from Foundation for Blood Research, Maine, 1988.



# **Join us in a new kind of partnership ... uniting doctors, lawyers, teachers, parents, and youth against drug and alcohol abuse.**

Become part of the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the



war against drugs. Become part of a unique initiative in Maryland to bring doctor/lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations Department  
at 301-539-0872, 1-800-492-1056.**

Doctor/Lawyer/Teacher Partnership Against Drugs

# Timely Information When Seconds Are Like Hours in the Fight Against AIDS...

**Access AIDS information in seconds  
with the on-line services of the NLM**

## **AIDS is everywhere.**

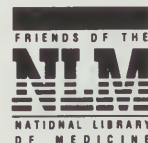
Despite public service educational programs on safety precautions and AIDS awareness, the AIDS crisis rages.

As AIDS research makes advances around the world, rapid access to that knowledge is vital.

*The National Library of Medicine*, the world's largest medical library, offers you this access.

AIDSLINE™, AIDSTRIALS, and AIDSDRUGS are on-line databases that provide educators, healthcare providers, scientists, and all others involved with AIDS with the most comprehensive and up-to-date information on AIDS. These unique sources contain information on literature, AIDS clinical trials, and agents being tested—in minutes.

**When time is critical, the NLM  
makes every second count.  
For complete medical information  
around the clock...**



For further information about the AIDS Information Services of the NLM, just fill out this coupon. Clip and mail to:

**The National Library of Medicine  
Public Information Office  
Bethesda, Maryland 20894**

**Merck  
Company  
Foundation**

Development of this public service message made possible by a grant from The Merck Company Foundation.

- ☐ Please send me more information about the NLM's AIDS Information Service  
☐ Please send me more information about the Friends of the National Library of Medicine

Name \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

ZIP \_\_\_\_\_

Telephone No. \_\_\_\_\_

I saw this ad in \_\_\_\_\_  
(name of publication)



---

# Mexiletine-associated Left Ventricular Dysfunction: A Case Study

---

Steven L. Ballas MD, Kenneth L. Baughman MD,  
Lawrence S.C. Griffith MD and Enrico P. Veltri MD

---

*Dr. Ballas completed his Internal Medicine residency at Sinai Hospital of Baltimore and is now in private practice in Youngstown, OH. Dr. Baughman is Associate Professor of Medicine and Dr. Griffith is Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD. Dr. Veltri is Director, Division of Cardiology, Department of Medicine, Sinai Hospital of Baltimore, Baltimore, MD. Reprints: Enrico P. Veltri MD, Sinai Hospital of Baltimore, Division of Cardiology, Belvedere at Greenspring Ave., Baltimore, MD 21215.*

---

*Mexiletine is a lidocaine analogue used in the treatment of symptomatic ventricular arrhythmias. However, in selected individuals with baseline diminished left ventricular function, it may possess clinically significant negative inotropic effects.*

---

**M**exiletine, a lidocaine analogue, is effective in the treatment of ventricular arrhythmias.<sup>1,2</sup> While mexiletine has mild negative inotropic effects, several clinical investigations have demonstrated no clinically significant hemodynamic effects from either oral or intravenous administration.<sup>3,4</sup> This report presents a case of severe, reversible, exacerbated left ventricular dysfunction accompanying mexiletine administration.

## Case Report

A fifty-eight-year-old male with remote inferior infarction was referred to the cardiology service for ventricular arrhythmias. Holter monitoring demonstrated runs of nonsustained ventricular tachycardia. Programmed stimulation demonstrated inducible sustained ventricular tachycardia and a gated blood pool scan revealed globally diminished left ventricular function (ejection fraction, 35 percent). Following failure of conventional antiarrhythmic agents, mexiletine was started with subsequent suppression of ventricular arrhythmias. An exercise stress test on mexiletine demonstrated adequate exercise tolerance without ischemia or ventricular arrhythmias; thus, he was discharged on mexiletine. Over the next six months, he developed progressive congestive failure initially responsive to an increase in diuretics, but subsequently refractory to digoxin, diuretics, and vasodilator therapy; this prompted readmission.

Physical examination was remarkable for elevated jugular venous pressure, bibasilar rales, a grade 2/6 mitral regurgitation murmur (old), and S3 gallop. Medications were digoxin (0.25 mg/day), furosemide (80 mg/day), captopril (100 mg/day), topical nitrates (10 mg/day), and mexiletine (300 mg every six hours). Admission chest radiography demonstrated cardiomegaly (car-

diothoracic ratio 21:32) with pulmonary vascular congestion, and electrocardiogram demonstrated normal sinus rhythm with poor R wave progression, and non-specific ST-T wave changes unchanged from previous tracings. Left ventricular ejection fraction was 12 percent as assessed by gated blood pool scan. A ventilation-perfusion lung scan revealed low probability for pulmonary emboli. Exercise stress testing to 70 percent predicted maximum heart rate lacked ischemic changes. Coronary angiography showed total occlusion of the right coronary artery and 60 percent stenosis of the proximal left anterior descending and circumflex arteries. Right ventricular endomyocardial biopsy showed mild fiber loss and hypertrophy without evidence of myocarditis.

It was concluded that the only plausible cause for increasing congestive failure in this patient was mexiletine. Mexiletine was discontinued and amiodarone started. Repeat Holter monitoring demonstrated suppression of ventricular arrhythmias. Gated blood pool scans demonstrated improvement in left ventricular ejection fraction to 29 percent at two months and to 45 percent at one year after discontinuation of mexiletine.

### Discussion

Side effects described with oral administration of mexiletine have been confined to gastrointestinal and neurologic dysfunction. Although intravenous administration of mexiletine has been reported to produce significant hemodynamic effects on myocardial contractility, peripheral vascular resistance, cardiac output, or blood pressure, these effects were clinically insignificant and may have been related to preexisting left ventricular dysfunction or rate of administration.<sup>1,4,5</sup> Kuhn et al<sup>3</sup> demonstrated no significant effects on systemic or pulmonary artery pressures or cardiac output following oral administration.

In contrast to the observations of Stein et al,<sup>4</sup> who found no change in left ventricular ejection fraction after mexiletine administration, we noted a decrease in left ventricular ejection fraction (35 to 12 percent) in this patient. Extensive evaluation failed to demonstrate alternative explanations and subsequent clinical and objective evidence of improvement was noted after discontinuing mexiletine. Although there was concomitant amiodarone therapy, serial gated blood pool scans in patients with left ventricular dysfunction and arrhythmias treated with amiodarone have shown only a slight increase in ejection fraction and thus it would appear unlikely that our patient's marked improvement was due to amiodarone.<sup>6</sup>

Based on these findings, we conclude that the negative inotropic effects of mexiletine may be clinically significant in selected individuals with baseline diminished left ventricular function.

### References

1. Podrid PJ, Lown B. Mexiletine for ventricular arrhythmias. *Am J Cardiol* 1981; 47:895-902.
2. Stein J, Podrid PJ, Lampert S, Hirsowitz G, Lown B. Long-term mexiletine for ventricular arrhythmia. *Am Heart J* 1984; 109:1091-98.
3. Kuhn P, Klicpera M, Kroiss A, Zilcher H, Kaindi F. Antiarrhythmic and hemodynamic effects of mexiletine. *Postgrad Med J* 1977; 53:Suppl 1:81-3.
4. Stein J, Podrid PJ, Lown B. Effects of oral mexiletine on left and right ventricular function. *Am J Cardiol* 1984; 54:575-8.
5. Block PJ, Winkle RA. Hemodynamic effects of antiarrhythmic drugs. *Am J Cardiol* 1983; 52:14C-23C.
6. Trobauch GB, Kudenchuk PJ, Greene HL, Tutt RC, Kingston E, Gorham JR, Gross BW, Graham EL, Sears GK, Werner JA. Effect of amiodarone on ventricular function as measured by gated radionuclide angiography. *Am J Cardiol* 1984; 54:1263-68.

### Acknowledgment

We are grateful to Ms. Linda Schenker for secretarial assistance in preparing the manuscript. ■

## Gynecare Center Abortion



General Anesthesia & Local Anesthesia  
**FREE Pregnancy Tests** (8 AM-12 NOON)  
SONOGRAMS • BIRTH CONTROL SERVICES  
AIDS TESTING • FEMALE STERILIZATION

Patriot's Plaza, 8055 Ritchie Hwy, Suite 204, Pasadena, MD



IMMEDIATE CONFIDENTIAL HELP

**761-4774**

TOLL FREE 1-800-548-5062



---

# Proarrhythmia: Disparity of Programmed Electrical Stimulation Results and Spontaneous Occurrence: A Case Report

Angel E. Alicea MD, Enrico P. Veltri MD and Diana Aarons RN

---

From *Sinai Hospital of Baltimore* where Dr. Alicea is a Senior Medical Resident; Dr. Veltri is Director, Division of Cardiology, Department of Medicine; and Ms. Aarons is a Clinical Research Nurse, Sudden Death Prevention Program. Reprints: Enrico P. Veltri MD, Division of Cardiology, (Sinai Hospital), Belvedere at Greenspring Ave, Baltimore, MD 21215.

---

*The disparity noted between programmed ventricular stimulation results and spontaneous occurrence of proarrhythmia suggests that programmed ventricular stimulation may be insensitive in identifying the risk and underlying mechanism of proarrhythmia.*

---

**P**roarrhythmia, defined as the new onset or aggravation of existing arrhythmia, is a known, potentially lethal side effect of virtually all antiarrhythmic drugs currently in use.<sup>1-3</sup> In one series, spontaneous aggravation of arrhythmia was noted with 11 percent of all drugs tested and in 34 percent of patients treated with multiple antiarrhythmic drugs.<sup>3</sup> In another series using programmed ventricular stimulation, proarrhythmia was noted in 16 percent of the drug trials.<sup>4</sup>

Attempts have been made to identify risk factors or clinical predictors of arrhythmia aggravation by antiarrhythmic drug therapy. Patients with left ventricular dysfunction and a history of sustained ventricular tachycardia or ventricular fibrillation have been shown to have a significant increased risk.<sup>5</sup> More recently, an abnormal repolarization response to exercise has been found in patients who develop polymorphous ventricular tachycardia in response to type Ia antiarrhythmic drugs.<sup>6</sup>

We present a case report of a patient with a normal structural heart and good ventricular function who presented with recurrent syncope and inducible, symptomatic, nonsustained ventricular tachycardia suppressed by quinidine, yet in whom a spontaneous proarrhythmic event developed on the same drug hours later.

## Case Report

An eighty-one-year-old white female was admitted for evaluation of recurrent syncope of unknown origin. During the nine months prior to her admission, she experienced four syncopal episodes unrelated to any specific activity or change in posture. There were no associated symptoms of chest pain, dyspnea, palpitations, aura, or incontinence. Previous cardiac and neurologic workups had revealed a normal electroencephalogram (EEG) and computed tomography (CT) scan of the head. Echocardiography and an exercise stress test were normal. Twenty-four-hour Holter monitoring revealed frequent and complex ventricular ectopy, including multifocal forms.

The patient's past medical history was significant for hypertension and vertigo treated with Captopril 12.5 mg by mouth (po) twice a day (bid), and Meclizine 12.5 mg po bid. She denied tobacco or alcohol use.

Physical examination revealed a well-developed, elderly white female in no acute distress. Her blood pressure was 190/80 mm Hg, and her pulse was 80 beats per minute (bpm) with ectopics without orthostatic changes. There were no carotid bruits, good carotid upstrokes, and no jugular venous distension. Lungs were clear to auscultation. Heart examination was significant for a soft II/VI systolic ejection murmur at the aortic base with a I/VI holosystolic murmur at the apex with radiation to the axilla. Distal pulses were normal. Neurologic examination was unremarkable.

Admission blood work was normal. Electrocardiogram revealed normal sinus 75 bpm with left ventricular hypertrophy and nonspecific ST-T wave changes. QTc was 0.40 seconds. Twenty-four-hour Holter monitoring performed off antiarrhythmic drugs revealed frequent ventricular ectopic beats.

The patient underwent electrophysiologic study<sup>7</sup> which revealed normal sinus and atrioventricular (AV) nodal function. Baseline conduction intervals were normal. There was no evidence of distal conduction disease as assessed by atrial stimulation and decremental pacing. Using programmed ventricular stimulation single, double, and triple extrastimuli, as well as ventricular burst pacing, reproducible symptomatic nonsustained ventricular tachycardia (the longest 13 beats) was induced. Following 286 mg of quinidine infusion (5 mg/kg) over twenty minutes, repeat programmed ventricular stimulation using the same stimulation protocol induced a maximum of +1 repetitive ventricular response. QTc following quinidine infusion was 0.60 seconds.

The patient returned to the telemetry ward with a standing order for Quinaglute 324 mg po three times a day (tid). She received the first dose approximately six hours post-infusion and three hours later developed Torsade de Pointes associated with presyncope (Figure). Electrolytes (including potassium and magnesium) were normal. QT was found to be prolonged (QTc = 0.50 seconds) and the quinidine level was 1.8 md/dl. She was transiently placed on lidocaine. Quinaglute was discontinued. Mexiletine was subsequently started, however it was discontinued due to gastrointestinal side effects. Encainide 35 mg po tid was initiated. Repeat programmed ventricular

stimulation revealed no inducible ventricular arrhythmia. Subsequent Holter monitoring revealed suppression of all ventricular ectopy. She has been followed for one year on Encainide therapy and has had no recurrence of syncope.

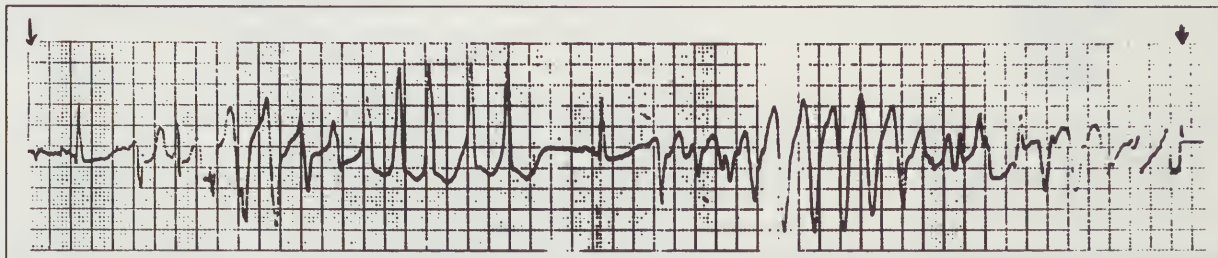
## Discussion

The disparity of programmed electrical stimulation results and the spontaneous occurrence of a proarrhythmic response in this case draws attention to questions regarding safe antiarrhythmic drug use. What is the mechanism of proarrhythmia? And, how sensitive is programmed electrical stimulation testing in identifying patients at risk of proarrhythmia?

In regard to the first question, abnormal impulse conduction (reentry), abnormal automaticity, and triggered automaticity are mechanisms proposed for spontaneous occurrence of arrhythmias, as well as proarrhythmic response to antiarrhythmic drugs.<sup>1,8</sup> Levine et al proposed that prolongation of the JT component of the QT interval predisposes toward early after-depolarization and, thus, the development of triggered activity at the cellular level.<sup>1</sup> This would manifest clinically as polymorphic ventricular tachycardia or Torsade de Pointes.

Torsade de Pointes is a proarrhythmic response known to occur in patients treated with antiarrhythmic drugs, specifically drugs in type Ia.<sup>9,10</sup> A significantly prolonged QT interval (QTc >0.44) is a prerequisite associated with Torsade de Pointes. In our case, the patient had a normal baseline QTc with a post-infusion QTc of 0.60 seconds, yet without manifest proarrhythmia during or immediately post-infusion of quinidine. Other risk factors associated with proarrhythmic response (such as hypokalemia, concomitant use of digitalis, or atrial fibrillation with variable RR intervals) were not found in our patient, nor was apparent structural heart disease. Furthermore, the proarrhythmic response occurred in the first few hours of therapy (with a subtherapeutic level at the time), suggesting an idiosyncratic response and not dose-dependency.

Regarding the second question, although electrophysiologic studies may be considered the gold standard in testing antiarrhythmic drug efficacy, this testing may be insensitive to proarrhythmia. Horowitz et al showed that electrophysiologic testing could be effective in provoking possible proarrhythmic responses



**Figure.** Continuous electrocardiographic strip (11 seconds between arrows) depicting spontaneous polymorphic ventricular tachycardia three hours following initial oral quinidine dose.



by antiarrhythmic drugs, however no study has analyzed these induced arrhythmias manifesting clinically (i.e., spontaneous proarrhythmia).<sup>4</sup>

The arrhythmia induced in our patient during programmed electrical stimulation was morphologically different from that observed at the time of the spontaneous proarrhythmic event. This observation suggests that these arrhythmias likely occur by different mechanisms, and that drug efficacy assessment by programmed stimulation testing for one mechanism does not exclude proarrhythmia occurring by another mechanism. It has been proposed that programmed stimulation induces arrhythmias governed by a reentry mechanism, albeit the induction of arrhythmia by a triggered activity mechanism cannot be completely excluded. If this were the case, the proarrhythmia noted in our patient would likely have occurred by a triggered mechanism not identifiable by programmed stimulation.

In summary, this case illustrates the need for better methods to identify patients at risk for proarrhythmic responses to antiarrhythmic drugs. Demonstrable efficacy assessment by programmed electrical stimulation does not exclude spontaneous proarrhythmic response. Better understanding of the underlying mechanism by which antiarrhythmic drugs cause proarrhythmia may yield the information necessary to identify these patients prior to the manifestation of potentially life-threatening events.

## References

1. Levine JH, Morganroth J, Kadish AH. Mechanisms and risk factors for proarrhythmia with type IA compared with IC antiarrhythmic drug therapy. *Circulation* 1989; 80:1063.
2. Zipes PP. Proarrhythmic effects of antiarrhythmic drugs. *Am J Cardiol* 1987; 59:26E.
3. Velebit V, Podrid P, Lown B, Cohen BH, Graboyes TB. Aggravation and provocation of ventricular arrhythmias by antiarrhythmic drugs. *Circulation* 1982; 65:886.
4. Horowitz LN, Greenspan AM, Rae AP, Kay HR, Spielman SR. Proarrhythmic responses during electrophysiologic testing. *Am J Cardiol* 1987; 59:45E.
5. Slater W, Lampert S, Podrid PJ, Lown B. Clinical predictors of arrhythmia worsening by antiarrhythmic drugs. *Am J Cardiol* 1988; 61:349.
6. Kadish AH, Weisman HF, Veltri EP, Epstein AE, Slepian MJ, Levine JH. Paradoxical effects of exercise on the QT interval in patients with polymorphic ventricular tachycardia receiving Type Ia antiarrhythmic agents. *Circulation* 1990; 81:14.
7. Veltri EP, Reid PR, Platia EV, Griffith LSC. Results of late programmed electrical stimulation and long-term electrophysiologic effects of amiodarone therapy in patients with refractory ventricular tachycardia. *Am J Cardiol* 1985; 55:375.
8. Rosen MR, Wit AL. Arrhythmic actions of antiarrhythmic drugs. *Am J Cardiol* 1987; 59:10E.
9. Keren A, Tzivoni D, Gavish D. Etiology, warning signs, and therapy of Torsade de Pointes. A study of 10 patients. *Circulation* 1981; 64:1167.
10. Ruskin JN, McGovern B, Garan H, DiMarco JP, Kelly E. Antiarrhythmic drugs: A possible cause of out-of-hospital cardiac arrest. *N Engl J Med* 1983; 309:1302.

## Acknowledgment

We thank Ms. Linda Schenker for preparation of this manuscript.

## Speak Out on Consultation

*Consultation*, a twice-weekly radio program sponsored by the Medical and Chirurgical Faculty of Maryland allows Med Chi physicians to discuss the latest developments in medicine and to answer questions about health issues. Med Chi currently airs two sessions of Consultation weekly:

### Consultation "LIVE"

An hour-long *live* program  
Airs Sunday from 2:00 to 3:00 p.m.  
Broadcast across the country  
Call-in format: Physician answers questions from listeners

### Consultation "PRETAPED"

A half-hour *pretaped* program  
Airs Sunday at 7:30 a.m.  
Broadcast on WBAL - AM radio  
Interview format: one-on-one talk with John Stupak

**Med Chi encourages all physicians to appear on these innovative programs. To register fill in the form below.**  
**Yes, I am interested in speaking on Consultation. Please contact me with scheduling information.**

Name \_\_\_\_\_ Specialty \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

Return this form to: Betsy Newman, Med Chi, 1211 Cathedral Street, Baltimore, MD 21201-5585. For more information contact Betsy Newman at 301-539-0872 or In Maryland 1-800-492-1056.

# Succeed In The 90's With

# SMART C·H·A·R·T

## Computerized Medical Records

Did you know that most doctors spend about 40% of their time recording and trying to decipher patient histories from traditional Medical Charts?

Smart Chart's unique software package affords quick and easy access to medical records.

By using Smart Chart, you will have more time to...

- See patients
- Conduct research
- Enjoy yourself!

Call Smart Chart, Inc. today and see how easy it is to *Succeed in the 90's with Smart Chart!*

MAIL OR FAX THIS COUPON TO:  
Smart Chart, Inc.

11212 Grandview Avenue, Suite 108  
Wheaton, Maryland 20902  
1-800-783-7825  
301-946-7825 (Metro. D.C.)  
Fax 301-762-2831

YES! I am interested in Smart Chart.

Name \_\_\_\_\_

Company \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

## Maryland Metabolic Institute Announces Their New Location and Continuation of Services

A new strategy to improve patient care

*We help the physician  
by helping the patient  
help themselves*

**H**ealth can be maintained by teaching patients good care habits. Especially for those with needs related to:

- diabetes including gestational diabetes
- weight reduction and maintenance
- dietary problems of all types
- stress management

Now the time consuming burden of patient training can be transferred from a busy practice to a competent health care team. A certified nurse educator, master trained dietitians and behavior counselors will return the patient well educated to their primary care physician.

Training Programs Include:

### Diabetes Education

- 20-hour courses, children and adults
- glucose monitoring
- ambulatory insulin instruction
- diabetes and pregnancy
- gestational diabetes

### Behavior Modification

- weight reduction and maintenance
- modified fasting: Optifast
- limited diets: Optitrim
- full food control: LEARN®
- stress management

### Dietary Counseling

- all medical disorders

Call for an appointment or further information or have patients schedule a consultation.

**MMI Diabetes Center\* (301) 296-0025**  
**MMI Optifast® Weight Reduction and Maintenance Program\*\* (301) 494-8338**

\*formerly International Diabetes Center of Maryland  
\*\*affiliated with GBMC Agency, Inc.

New location:  
Between Kenilworth and York Road at 695, Exit 26S  
110 West Road, Suite 210  
Towson, Maryland 21204  
Thaddeus E. Prout, M.D. FACP



### Cancer Immunotherapy, Part II: New Approaches

In the seventies, attempts were made to study and understand tumor immunity at the clinical level. Attention was directed to *in vivo* testing and *in vitro* assays. This produced a large amount of data which unfortunately lacked correlation with the stage of the tumors studied. Two tumors were studied more than any other malignancies, namely, cutaneous melanoma and large bowel cancer.

In 1976, we reported that patients with Dukes' B, C, and even early D adenocarcinoma of the large bowel showed no evidence of general immunosuppression when tested by a variety of tumor non-specific tests.<sup>1</sup> These included: (1) Bacterial, fungal, and viral antigens in delayed hypersensitivity skin reactions to purified protein derivative (PPD), monilia, mumps, varidase, and the allergen dinitrochlorobenzene (DNCB); (2) lymphocyte stimulation assays to three mitogens (phytohemagglutinin, concanavalin-A, and pokeweed) and to four antigens (PPD, monilia, mumps, and varidase); (3) T-lymphocyte and B-cell count by the rosette assays (helper and suppressor T-cell assays were not available at that time); and (4) in contrast, tumor-specific immunity has been noted in response to tumor-associated antigens in large bowel cancer.

Hellstrom and coworkers used colony inhibition assays to demonstrate that the lymphocytes from colorectal cancer patients prevented colony formation.<sup>2</sup> Their work suggested the presence of cross-reactive tumor-associated antigens in colorectal cancer, as well as individual tumor-specific transplantation antigens. Bull, Elias, and Greco have demonstrated specific cell mediated immunity in patients with Dukes' B and C large bowel cancers by the migration inhibition assays using tumor-associated antigens.<sup>3-6</sup> Cell mediated immunity to the tumor was observed before surgery but disappeared shortly after surgery. This tumor immunity could not be demonstrated in patients with Dukes' D disease (i.e., in those with distant metastasis, in patients with other malignancies, or in normal volunteers when their leukocytes were tested with large bowel tumor-associated antigens). Such findings had been confirmed by Shani, using leukocyte adherence inhibition assay.<sup>7</sup> Using monoclonal antibodies, Herlyn and associates have directly demonstrated the presence of tumor-associated antigens in colorectal carcinoma.<sup>8</sup>

These findings highly suggested that adenocarcinomas of the large bowel are immunogenic tumors, and it seemed that the postoperative period was an ideal time to initiate tumor specific immunotherapy in patients who had undergone curative surgery, but had a guarded prognosis (i.e., Dukes' B<sub>2</sub> and C disease). This is because such patients will have low tumor bur-

den at the micro level, and their tumor-specific sensitization would be declining. Active immunization by autologous tumor cells was chosen, as such an approach may lead to prolonged periods of sensitization. In addition, these patients are not immunosuppressed once they recover from the effects of surgery and anesthesia, therefore they can mount an immune response. The results of this approach showed some success in sensitizing these patients, however, three or more vaccinations were required to establish tumor specific sensitization, and it seemed that such sensitization again disappeared over a short period of time.<sup>9-10</sup> Similar findings had been noted in melanoma.

The interest in adoptive immunity was reborn when Rosenberg reported a 20 to 25 percent complete response over a long period of time in patients with widespread metastatic disease treated by Interleukin-2 (IL-2) and Lymphokine Activated Killer (LAK) cells.<sup>11</sup> When large numbers of the patient's peripheral blood lymphocytes are incubated *in vitro* with a high concentration of IL-2 (which is a lymphokine) for a few days, it will produce LAK cells. These are cytotoxic to the autologous tumor and often to other various malignant cells. As a general rule, LAK cells are not toxic to normal tissue. The activity and generation of LAK cells and their precursors, the Natural Killer (NK) cells, were measured preoperatively in patients with gastrointestinal malignancies. Both the generation and activity of LAK and NK cells were reduced in patients with metastatic disease compared with those with local or regional disease.<sup>12</sup> This further confirms our findings with the leukocyte assays.

Recently, it has been shown that the Tumor Infiltrating Lymphocyte (TIL) cells and IL-2 combination were more cytotoxic to the tumors, and they are fifty to one-hundred times more effective. The TIL cells presumably came via the peripheral circulation in the preoperative period. Such information seems to support our previous findings when we used the leukocyte migration inhibition assays.<sup>13</sup>

As a result of the above findings, it seems that better results in cancer immunotherapy can be obtained by a combined approach of adoptive, followed by active, tumor-specific immunotherapy. I strongly believe that IL-2 can be used as an adjuvant to surgery. It should be administered preoperatively while the peripheral lymphocytes are sensitized to the tumor and while TIL cells are present *in vivo* at the tumor. Postoperatively, patients with no distant metastasis should be maintained on IL-2, then shifted to active tumor-specific immunotherapy. Furthermore, patients with resectable distant metastases amenable to surgical extirpation (e.g., patients with liver metastases from large bowel cancer) can be managed

Could Your Practice  
Use a Little

**PEP** ?

### Patient Education Phone Systems

may be the answer. Your telephone is the lifeline to your practice. Each time you put a patient on hold, you're missing an ideal opportunity to educate them about your practice and the procedures you perform. Informed patients are happy patients. Happy patients are your best source of referrals and new business.

With a P.E.P. System in your office, you just press Hold. A custom recording does the rest:

- Tells where you are located.
- Tells when you are open.
- Explains the procedures you perform.
- Enhances your practice image.
- Keeps your patients informed, interested and on the line.

To arrange a demonstration, contact:

**MJD Marketing**  
7605 Leesburg Dr.  
Bethesda, Md. 20817  
1-800-326-4869

**STOP PUTTING YOUR  
PRACTICE ON HOLD**

similarly. Such an approach could yield more effective killer cells, which are more potent than the present LAK and TIL cells, in the adjuvant set up. It is hoped this could give better survival.

### References

1. Elias EG and Elias LL. Immune status of patients with colorectal carcinoma. *Proc Am Assoc Cancer Research* 1976; 17:72.
2. Hellstrom I, Hellstrom KE and Shepard TH. Cell mediated immunity against antigens common to human colonic carcinoma and fetal gut epithelium. *Int J Cancer* 1970; 6:346-51.
3. Bull DM, Leibach JR, Williams MA and Helms RA. Immunity to colon cancer assessed by antigen induced inhibition of mixed mononuclear cell migration. *Science* 1973; 181:957-9.
4. Elias EG and Elias LL. Some immunologic characteristics of the carcinoma of the colon and rectum. *Surg Gynecol and Obstet* 1975; 141:715-8.
5. Elias EG, Elias LL et al. Cellular immunity in patients with colorectal carcinoma measured by autologous leukocyte migration inhibition. *Cancer* 1977; 40:687-92.
6. Greco RS. Relation between immunity and survival in carcinoma of the colon and rectum. *Am J Surg* 1979; 137:752-6.
7. Shani A, Ritts RE et al. A prospective evaluation of the leukocyte adherence inhibition test in colorectal cancer and its correlation with carcinoembryonic antigen levels. *Int J Cancer* 1978; 22:113-9.
8. Herlyn M, Steplewski Z et al. Colorectal carcinoma-specific antigen: Detection by means of monoclonal antibodies. *Proc Natl Acad Sci USA* 1979; 76:1438-42.
9. Elias EG, Schwender LA et al. Adjuvant immunotherapy in large bowel cancer: Sensitization by autologous tumor cell preparation. In: Beahrs OH, Higgins GA and Weinstein JJ, eds. *Colorectal Tumors*. Philadelphia: Lippincott Co. 1986:255-63.
10. Hoover HC, Surdyke MG et al. Prospective randomized trial of adjuvant active-specific immunotherapy for human colorectal cancer. *Cancer* 1985; 55:1236-43.
11. Rosenberg SA, Lotze MT et al. Observations on the administration of autologous lymphokine-activated killer cells and recombinant Interleukin-2 to patients with metastatic cancer. *N Engl J Med* 1985; 313:1485-92.
12. Monson JRT, Ramsden CW et al. Lymphokine Activated Killer (LAK) cells in patients with gastrointestinal cancer. *Gut* 1987; 28:1420-25.
13. Rosenberg SA, Lotze MT et al. Experience with the use of high-dose Interleukin-2 in the treatment of 652 cancer patients. *Ann Surg* 1989; 210:474-85.

*E. GEORGE ELIAS MD, PHD*

Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland

*Tumor conferences are held weekly on Tuesday between 8 and 9 a.m. in Room S9A06 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call 301-328-5224 by noon Monday to be placed on the schedule. Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD 21201.* ■



# WE KEEP THE STANDARDS UP.

Founded during the medical liability insurance crisis of 1975, P.I.E. Mutual Insurance Company has consistently offered quality insurance programs and services at very competitive rates.

What's the catch? Quality. P.I.E. Mutual is a physician-owned underwriter dedicated to maintaining a high level of quality among the physicians we serve. This includes:

**Physician Managing Boards**, established in each region of operation to provide input on two important functions:

1. review of new applicants.
2. review of claims.

**Quality Rated Insurance Program:** a modified claims-made plan which works in the physician's favor to reward loss-free physicians

and provides added protection not available in other policies.

**A Financially Sound Reinsurance Program** with Lloyd's of London, the world's most prestigious reinsurer.

**An Aggressive Defense Team**, experienced in all types of medical liability claims and willing to fight for your cause.

If your standards match ours, let's talk business.

---

THE P•I•E MUTUAL

---

INSURANCE COMPANY

---

North Point Tower • 1001 Lakeside Ave. • Suite 1800  
Cleveland, OH 44114-1149 • (216) 736-8400 • (800) 228-2335

---

**Winterich • Neff & Associates**  
7 East Redwood • Suite 810  
Baltimore, Maryland 21202  
(301) 234-2800

# SO WE CAN HOLD THE PREMIUMS DOWN.

## THE JOHNS HOPKINS MEDICAL INSTITUTIONS

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

June 3-14	<b>The Fourth Annual Summer Institute in Environmental Health Studies.</b> Info: Dr. Jacqueline Corn, 301-955-2609.
June 10-12	<b>Advanced Pediatric Life Support Courses.</b> 20 Cat 1 AMA/PRA credits; 20 AAP PREP credit hours. Fee: \$495. Info: 301-955-2959.
June 13-14	<b>Design and Analysis Issues in Clinical Trials.</b> 14.5 Cat 1 AMA/PRA credits. Fee: to be announced. Info: 301-955-2959.
June 13 - 15	<b>Endoscopic Sinus Surgery: Laboratory and Lecture Series.</b> 25 Cat 1 AMA/PRA credits for laboratory series; 17.5 Cat 1 AMA/PRA credits for lecture series. Fee: \$950 laboratory series; \$295 lecture series. Info: 301-955-2959.
July 29 - August 2	<b>Control of Biohazards in the Research Laboratory.</b> Info: Dr. Byron Tepper, 301-955-5918 or Dr. Jacqueline Corn, 301-955-9334.

### Continuously Throughout the Year

**Visiting Preceptorship in Pediatric Critical Care Medicine.** Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. Info: 301-955-2959.

**Ophthalmic Electrophysiology Technician Training Course.** Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. Info: C. Kearney 301-955-2959.

**Ophthalmology Grand Rounds.** Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. Through June 24, on Mondays, 8:00-10:00 am; beginning July 1, on Thursdays, 7:30-9:00 am. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700.

**Neuro-ophthalmology Conference.** Held twice per month. Info: 301-955-5700.

**Cornea Conference.** Held monthly. Info: 301-955-5700.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.

### *Physician Placement Services*

The Medical and Chirurgical Faculty of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

**Physician Placement Service  
1211 Cathedral St., Baltimore, MD 21201-5585  
(301-539-0872)**

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the *Physician Placement Service*. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland. **MMJ** announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.



## UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

June 5	<b>Subspecialty Care in General Practice</b> , at the University Club, Baltimore, MD. 1 Cat 1 AMA/PRA credit per date. Fee: \$50. Info: 301-328-3103.
June 7-8	<b>Current Practical Concepts in Endocrinology and Metabolism</b> , at Harbor Court Hotel, Baltimore, MD. 10 Cat 1 AMA/PRA credits. Fee: \$150.
June 23-28	<b>17th Annual Family Medicine Review Course</b> , at the Carousel Hotel, Ocean City, MD. 20+ Cat 1 AMA/PRA credits; 20+ AAFP prescribed hours. Fee: \$395.
June 27-28	<b>10th Annual Update in Obstetrics and Gynecology</b> , at the Annapolis Waterfront Hotel, Annapolis, MD. 14 Cat 1 AMA/PRA credits; 14 ACOG cognates. Fee: \$225.
June 28-30	<b>Dermatology Days</b> , at the Carousel Hotel, Ocean City, MD. 14 Cat 1 AMA/PRA credits; 14 AAFP prescribed hours. Fee: \$250.
September 6	<b>Current Concepts in Ophthalmology: 11th Annual Clinical Conference</b> , at the Columbia Inn, Columbia, MD. 6 Cat 1 AMA/PRA credits. Fee: \$75.

### Continuously Throughout the Year

**Visiting Professor Program** - A directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunities for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Hour-for-hour Cat 1 AMA/PRA credits available. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.

## Information for Authors

Manuscripts may be sent to Editor, **MMJ**, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

Include full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles.

Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in **MMJ** is protected by copyright and may not be reproduced without the written permission of both the principal author and **MMJ**.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.

## MISCELLANEOUS MEETINGS

- June 29** **Lyme Disease Seminar**, at Holy Cross Hospital, Silver Spring, MD. 3 Cat 1 AMA/PRA credits. Fee: \$25. Info: Dr. Wendy Feaga, 301-531-6330.
- August 14-17** **West Virginia Medical Society Annual Meeting**, at The Greenbrier, White Sulphur Springs, WV. Cat 1 AMA/PRA credits available. Fee: \$125 members; \$175 nonmembers. Info: Nancie Divvens, 304-925-0342.
- September 13-14** **Nutrition Support in the Cancer Patient**, sponsored by the Maryland Society for Parenteral Enteral Nutrition, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Cat 1 AMA/PRA credits available. Fee: \$10 members; \$20 nonmembers. Info: B. Pharoan MD, 301-661-9300.

**Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.**

- June 6** **Recent Advances and Update in Oral & Maxillofacial Surgery: Dental Implants and Orthognathic Surgery**
- June 13** **Mechanisms and Treatment of Head Injuries**
- June 20** **Update in Pediatric Orthopedic Surgery**
- June 27** **Legal and Business Issues Facing a Growing Practice**
- July 11** **Surgical Management of Mitral and Aortic Valve Disease**
- July 18** **A New Approach to Migraine**
- July 25** **Controversies in Central Venous Catheterization**
- August 1** **Overview of the Norplant System**
- August 15** **HCFA Substandard Care Regulations**
- August 22** **Kidney and Pancreas Transplantation**
- August 29** **AIDS Panel Discussion**

**American College of Emergency Physicians, 1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.**

- June 6** **Executive Committee Meeting**

### Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of the *Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel  
MMJ 1211 Cathedral Street  
Baltimore, MD 21201

#### Old Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

#### New Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_

Date: \_\_\_\_\_



**The AMA  
Hospital Medical Staff Section  
Seventeenth Assembly Meeting  
June 20 - 24, 1991  
Chicago Marriott Hotel  
Chicago, Illinois**

**Highlights of the Annual Meeting will include:**

- an educational program on the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and Practice Parameters;
- presentation by the AMA-HMSS Governing Council of reports on medical staff issues including Evaluation of the Hospital Medical Director and Criteria for Evaluating the Performance of the Hospital Medical Director, PRO Required Education of Hospital Medical Staff and Patient Responsibility of On Call Physicians;
- an information exchange on PRO and Managed Care Review;
- AMA-HMSS Governing Council elections for the positions of Delegate, Alternate Delegate and one Member-At-Large.

**For Information Contact:**

Department of Hospital Medical Staff Services  
American Medical Association  
515 North State Street  
Chicago, Illinois 60610  
Phone (312) 464-4754 or 464-4761



**HMSS**

### PSYCHIATRIST

Columbia - Busy child/family-oriented practice seeks additional psychiatrist. Send CV to Bob Goshen MD, Suite 207, Medical Arts Building, Columbia, MD 21044 (301-964-9484).

### PHYSICIANS WANTED

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

### OBSTETRICIANS

Excellent opportunity for OBSTETRICIANS establishing practice. Supplement your private practice with hospital position. Guaranteed income, opportunity for generating additional compensation (i.e., County OB deliveries; Assisting in Surgery and self-collection for walk-in patient deliveries). Excellent location in prestigious Montgomery County. Modern facility with 24-hour anesthesia and pediatric coverage and assistant for surgery. Progressive hospital environment. Call 301-891-5651.

### FAMILY PRACTITIONER WANTED

Full-time physician desired for expanding family practice in Howard County. BE/BC with Maryland license required. Full range of primary care services in new modern facility. Excellent income, full benefits with malpractice insurance. Potential for partnership. Reply to: Box 4.

### PART-TIME PEDIATRIC PRECEPTORS

Sinai Hospital of Baltimore is now hiring part-time Pediatric Preceptors to work in the Emergency Room. For more information, please call Susan Moriarty MD at 578-5737.

### RADIOLOGY PRACTICE

In the Greater Baltimore area, successful and continuously growing Radiology Practice. Parties interested in Partnership and/or other arrangement, please write: Radiologist, 406 W. Pennsylvania Ave., Towson, MD 21204.

### LOCUM TENENS PHYSICIAN

Join a comprehensive physician support service with a major medical center in south central Montana. Locum physicians provide primary care coverage (excluding routine OB) for physicians in rural Montana and Wyoming. Assignments vary in length. Reimbursement for expenses, malpractice, health insurance, CME. Call Locum Tenens Coordinator, 1-800-325-1774 or send CV to 1500 Poly Dr., Suite 103, Billings, MT 59102.

### PRACTICE WANTED

Will buy Int Med/Fam Med Practice in Balt City/Suburbs. Am ABIM certified. Will consider Gastro partnerships, too. Reply Box 6 or call 561-9473 eve/wkends.

### FOR SALE

General practice and office. Catonsville/Woodlawn area. 744-3666.

### OFFICE SPACE FOR RENT

1,050 sq ft new office next to St. Joseph Hospital. 301-337-6800.

## FAMILY PRACTICE/ INTERNAL MEDICINE

### Montgomery County, Maryland

Grow with an established multispecialty group in lucrative thriving metro area. Develop own practice within group and enjoy unlimited income potential. Excellent benefits include paid malpractice. Multi-site positions available at Mt. Airy and Rockville. Reply in confidence to:

Cheryl A. Dolan, Administrator  
Montgomery Medical Group, P.A.  
15235 Shady Grove Road, Suite 103  
Rockville, MD 20850  
or call (301) 417-7270

## BECO MANAGEMENT, INC.

### Medical Suites Available

Montgomery Village Professional Center  
19201 - 19271 Montgomery Village Avenue  
Gaithersburg, Maryland

Southern Medical Building  
9131 Piscataway Road  
Clinton, Maryland

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550



**OFFICE SPACE TO SHARE**

Available May 1991. Relatively small but efficient office (900 sq ft) in new St. Joseph's Professional Bldg, Towson. Rent negotiable. Call 337-7097.

**OWINGS MILLS OFFICE TO SHARE**

Growing internal medicine practice wishes to sublease space in new office. New office to open July 1, 1991. Layout input still possible. Receptionist and medical assistance also possible. For information, call Scott Rifkin MD 356-6504 or write 2 Park Center Court, McDonough Crossroads, Owings Mills, MD 21117

**OFFICE SPACE**

Attractive office space available to share with an established practice. Affordable rent, full exam and x-ray facilities within the office and reception staff. Located in Lutherville, convenient from the Beltway. Contact Kim Kitson at 301-296-1255.

**MEDICAL OFFICE FOR SALE OR SUBLEASE**

Brand new office located in Professional Center in Ellicott City. 912 sq ft. 2 exam rm. All equipment included. Call 461-7078.

**MEDICAL OFFICE**

Suitable for 1 or 2 physicians: St Mary's County, a rapidly growing semirural area. Contact Leon Berube for details, 997 Old Route 5, Mechanicsville, MD 20659 (301-884-3113).

**OFFICE SPACE**

Available for sublet in the Pikesville area. Morning and afternoon hours available. Please contact 484-5238.

**MEDICAL-SURGEON'S OFFICE TO SHARE**

Pikesville: office with private consultation room to sublease, full- or part-time; x-ray and lab available. Parking lot; near Metro stop & public transportation. 301-484-8066 except Tuesday.

**OFFICE SPACE**

Medical office to sublet in Perry Hall. Excellent space. 900 sq ft in medical building in growing area. Call 529-6440.

**MEDICAL OFFICE FOR SALE OR LEASE**

2000 sq ft in excellent location near Cross Keys in medical office building. Very convenient to most major hospitals. Contact Rick Tucker at 727-8347.

**NEEDED**

Busy ENT looking for new location/expansion? 800-900 sq ft or larger office space available for rent, busy medical building, Rockville, MD, with referring primary care physicians, no ENT in building or in close area. Call 301-230-0300.

**MEDICAL OFFICE SUITE FOR LEASE**

Osler Medical Center, Towson; near St. Joseph Hospital, GBMC, & Sheppard Pratt Hospital. Info: R.R. Kent MD, 301-323-5831 or 301-461-9922.

**MMJ  
Classified Advertising**

*Med Chi Members:  
\$5 per line per insertion*

*Physician Nonmembers:  
\$8 per line, minimum \$50 per ad*

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment.

Send ad replies or new ad copy to: **MMJ**, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

**EQUIPMENT FOR SALE**

Reflotron machine for sale. Used very little, in excellent condition. For more information, call 242-6220.

**PROFESSIONAL RESUME SERVICES**

Successfully serving physicians since 1976. All specialties. Effective! Confidential. We provide curriculum vitae preparation, cover letter development and career planning. Immediate service available. Call 1-800-933-7598 (24 hrs). Alan Kirschen, M.A. ■

**RIVA BAY OFFICE PROPERTIES, INC.**

**GRAND OPENING MARCH 1ST 1991 • CUSTOM FINISHED MEDICAL SUITES**

**A NEW concept in Medical Office Space**

**Prime, Prestigious Location - Convenient to Baltimore, Washington and Anne Arundel Medical Center**

**Turn Key Operation - Custom Medical Suites finished for medical practice use**

*Ample Free Parking; Janitorial Service Included; Receptionist, Spacious Central Waiting Area;*

*Court Yard; Signage; Option of On-Site Radiology and On-Site Laboratory*

**40% Preleased!**

For more information and a personal tour, please call Dr. Robert Marine or Susan Best 2525 Riva Road, Annapolis, Maryland 21401 (301) 269-7992 Balt./ (301) 858-5035 Wash.



## FOR SALE

Owning your own medical office offers the following advantages:

- Avoid Rent Escalation
- Guarantee Your Practice Location
- Pay Less Personal Taxes
- Build Equity In Real Estate

## ANNOUNCING

A new 45,000 square foot Medical Office Condominium

## ESSEX COMMUNITY MEDICAL CENTER

Superbly located across from Franklin Square Hospital Center

**Call: Amtrade International (301) 391-3080, FAX (301) 653-5093**

## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Anne Salmon Barone, Ph.D., M.D.  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000

## EMERGENCY PHYSICIANS

Well established, successful, independent fee-for-service group, based in a modern suburban community hospital, seeks career-oriented emergency physicians. Part-Time. Primary responsibility for patients on "fast track" and assist full-time physicians with more acute, complex patients as needed. Bonus incentives and flexible schedule. Close to Annapolis and ocean communities. Board prepared in EM or related field. Available immediately.

Please contact and send CV to:

Walter L. Scheetz, MD, Director  
Emergency Medicine Department  
North Arundel Hospital  
301 Hospital Drive  
Glen Burnie, MD 21061  
(301) 787-4571/4572





## THE BENEFITS ARE CLEAR...

Our new Philips 1.5 T magnet means superior MR images. The Gyroscan S15 Advanced Clinical System offers the highest resolution possible. And we offer 3-D MRI reconstruction to give you even greater diagnostic confidence. Our board certified radiologists are trained in advanced MRI technology to provide you with the highest degree of accuracy. Your patients will appreciate the increased comfort of the wider table, improved lighting and faster scan times.

This state-of-the-art Philips system is just a part of the advanced integrated diagnostic imaging services we provide. To get the whole picture, call us.

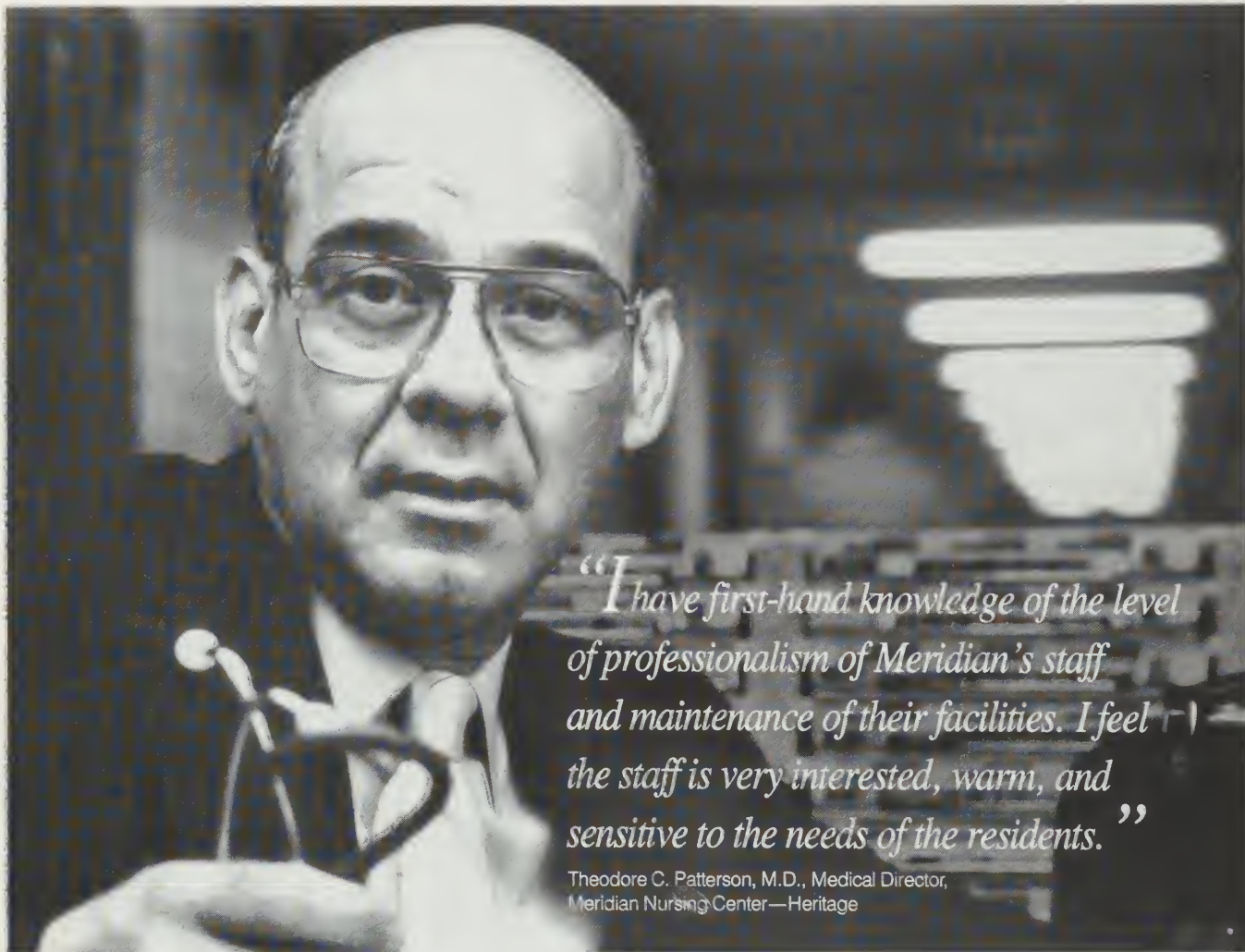


### **PEMBROOKE IMAGING & MRI CENTER**

Pembroke Square Medical Center  
5046 Route 301 South, Suite 101  
Waldorf, MD 20603

**932-4522 or Metro (301) 870-8434**

MRI • CT Scanning • 3D Reconstruction • Ultrasound • Doppler  
X-Ray • Fluoroscopy • Mammography • Special Procedures • Biopsies



*"I have first-hand knowledge of the level of professionalism of Meridian's staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents."*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer's patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there's our full-time activity directors, social workers, and dietitians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

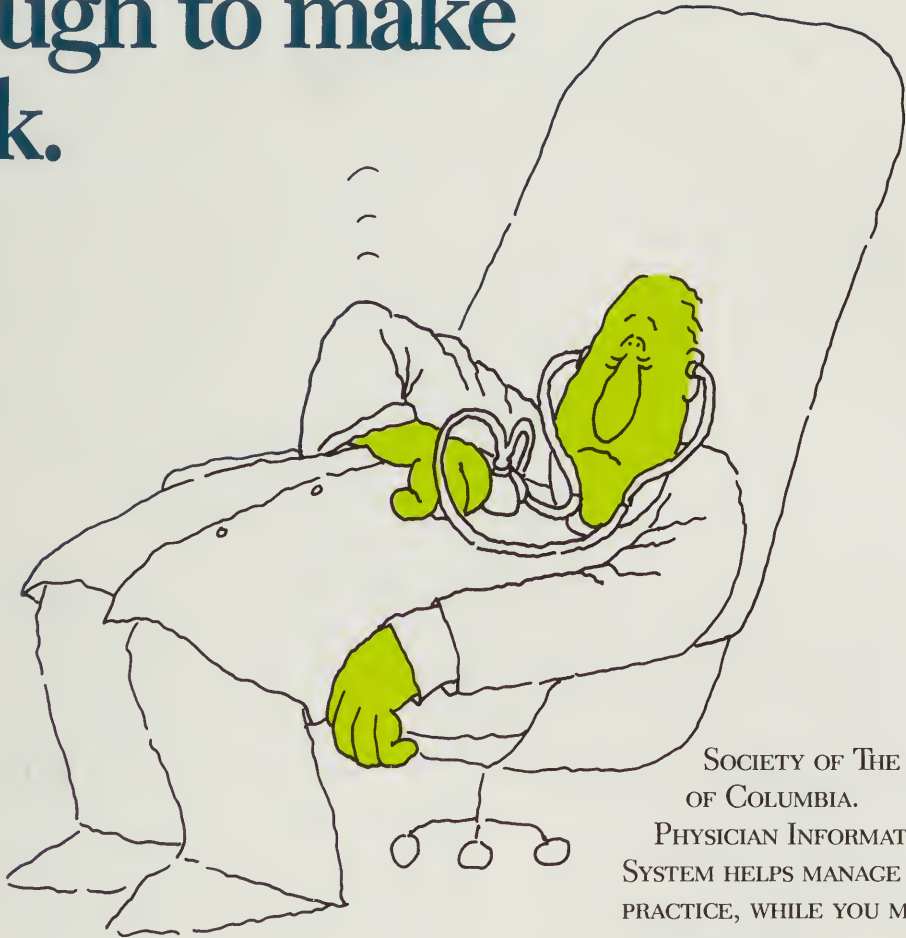
Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





# Competition, HMOs, Insurance and slow-paying patients... it's enough to make you sick.



THE PROBLEMS OF MANAGING A PRACTICE TODAY CAN REALLY MAKE YOU SICK.

EVEN WORSE, THEY CAN MAKE THE BUSINESS END OF YOUR PRACTICE SICK, TOO. THAT'S WHERE WE CAN HELP.

WE'RE CBSI, THE LEADER IN MEDICAL OFFICE AUTOMATION SYSTEMS SINCE 1977. OUR PHYSICIAN INFORMATION SYSTEM SUBMITS YOUR INSURANCE FORMS ELECTRONICALLY, POSTS PAYMENTS AND ADJUSTMENTS AUTOMATICALLY, AND RUSHES YOU COMPLETE, UP-TO-THE-MINUTE PATIENT CLINICAL AND FINANCIAL DATA. CURRENTLY RELIED UPON BY MORE THAN

**ALPHA MICROSYSTEMS**  
RIGHT FROM THE START.

5,000 PHYSICIANS IN OVER 50 MEDICAL SPECIALTIES AROUND THE AREA. MORE THAN 99% OF THESE SYSTEMS ARE STILL IN USE TODAY BECAUSE THEY'RE FLEXIBLE, ADAPTABLE AND CBSI BACKS THEM WITH UNPARALLELED HARDWARE MAINTENANCE, CUSTOMER SUPPORT AND TRAINING.

SINCE 1981, CBSI CONTINUES TO BE THE ONLY PROVIDER OF MEDICAL OFFICE AUTOMATION ENDORSED BY THE MEDICAL

SOCIETY OF THE DISTRICT OF COLUMBIA.

PHYSICIAN INFORMATION SYSTEM HELPS MANAGE YOUR PRACTICE, WHILE YOU MANAGE YOUR PATIENTS.

CALL 770-2292 RIGHT NOW TO FIND OUT MORE ABOUT PHYSICIAN INFORMATION SYSTEM. IN MARYLAND, CALL TOLL-FREE AT 1-800-638-6364.

# CBSI

COMPUTER BUSINESS SYSTEMS, INC.

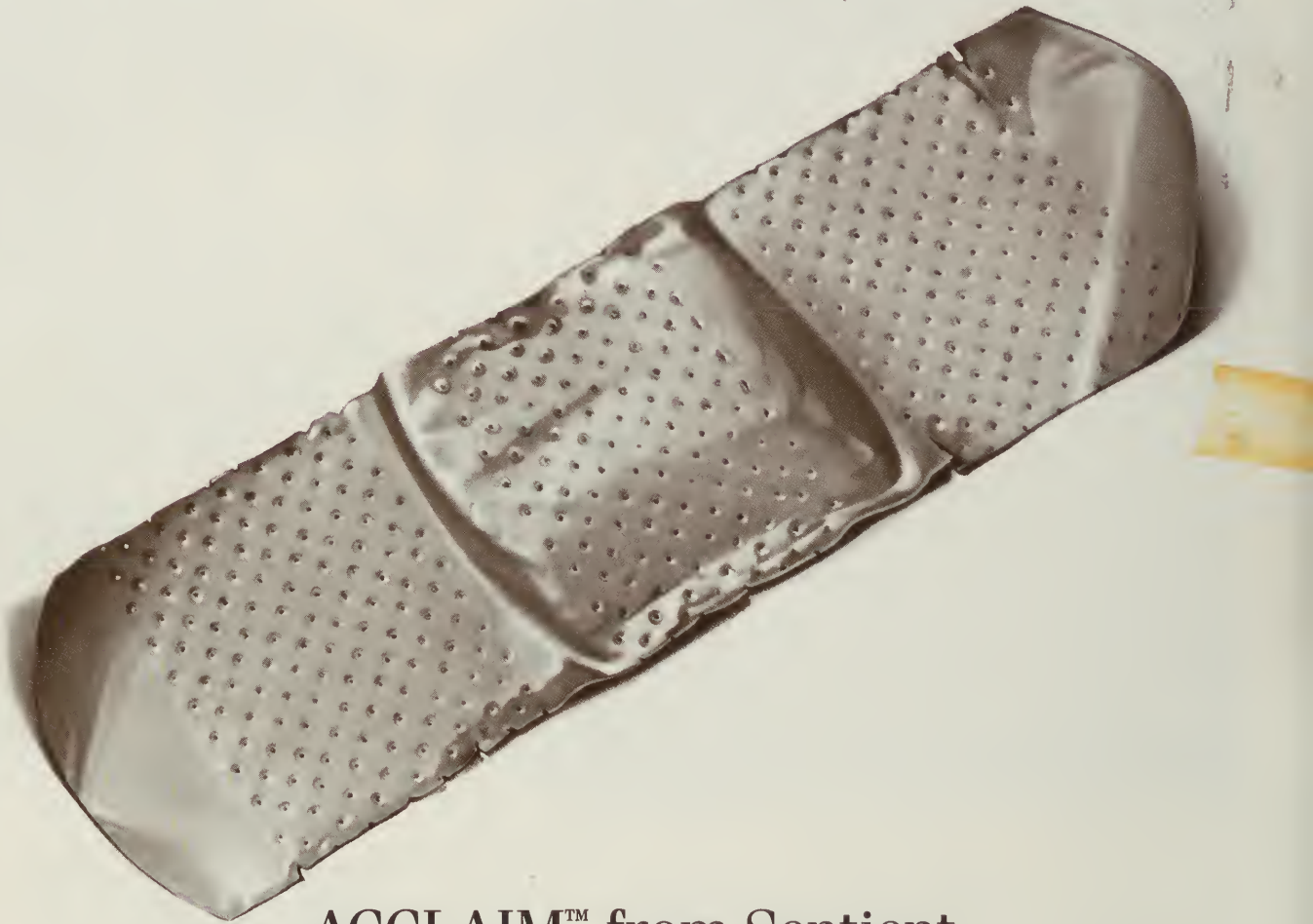
**YOUR PRACTICE IS OUR BUSINESS.**

6211 Executive Boulevard,  
Rockville, Maryland 20852  
(301) 770-2292  
1-800-638-6364 in Maryland

An Affiliate Member of MedServ



# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**

(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*



W1 MA76M

NO.7

1991

SEQ: SP0054434

MARYLAND MEDICAL JOURNAL

# MMJ

## Maryland Medical Journal

JULY 1991

NATIONAL  
LIBRARY

JUN 26 1991

OF  
MEDICINE

NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA MD 20894

Henry N. Wagner Jr., MD  
Winner of the AMA's  
Scientific Achievement Award

Endorsed by Med Chi  
for Maryland Physicians

© 1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.



## It's A Closed Box.

Simply put, your Medical Mutual premiums go into a closed box . . . and you own the box. We pay claims, we pay to defend physicians, we pay operating expenses. Any money left over belongs to you. That's it. No money goes to out-of-state owners, no money goes to subsidize operating expenses of a parent company located in another state. Dividends are paid to you, not to outside stockholders.

The physicians of Maryland planned it this way when you asked the Maryland General Assembly to create Medical Mutual to meet your special insurance needs. It's a concept that has worked well for over 15 years, and it's a concept that has made Medical Mutual the choice of the vast majority of physicians across the state.

The closed box. We're the only ones who operate this way. Why accept anything less?



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*

---

# MetPath



*"Your Partner in Practice"*

---

## Quality

- Quality assurance program directed by our full time QA manager and our technical director.
- Control samples of up to 10% of our work load.
- Outside proficiency program results, available to you by request.

## Service

Courteous client service, 24 hours a day.  
Flexible specimen pick-up schedules.  
Customized profiles and preprinted requisitions.  
Specialized report formats.

## Convenience

Comprehensive testing.  
4 STAT labs.  
27 Patient Service Centers.  
House call service in the Baltimore/Washington area.

---

**Regional Headquarters**  
1550 East Gude Drive  
Rockville, MD 20850  
(301)340-9800  
(800)722-7393

**Baltimore**  
1246 East Joppa Road  
Baltimore, MD 21204  
(301)583-1500  
(800)426-1676

Lab tours are welcome! Call Sales for an appointment.

a **CORNING** Clinical Laboratory

---



# MMJ

## Maryland Medical Journal

JULY 1991

VOLUME 40 NO 7

### ARTICLES

- Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award . . . . . 557**

*Michelle Burke MHSA and Betsy Newman*

"The only effective defense against nuclear weapons lies within the human mind. Perhaps, by studying the workings of the mind, biology can help us save ourselves."

- Stroke in the Young (Part II) . . . . . 565**

*Barney J. Stern MD, Steven Kittner MD, MPH, Michael Sloan MD, Constance Meyd MD, David Buchholz MD, Daniele Rigamonti MD, Robert Woody MD, John Meyerhoff MD, William Bell MD and Thomas Price MD*

Evaluation of the young stroke patient often requires an interdisciplinary approach because of the complexity of the problems encountered. We discuss some of the less common causes of stroke and present an approach to the patient.

- Disseminated Histoplasmosis in AIDS Patients in Maryland . . . . . 573**

*Michael A. Sauri MD, MPH & TM, Neil L. Julie MD, Herbert M. Juarbe MD, Frank J. Mayo MD, Charles H. Ligon MD, Robert L. Fox MD, Gregorio Koss MD, Julian T. Coggin MD, Joy W. Burbach MD, Joel H. Barton MD and Joseph D. Mashburn MD*

Disseminated histoplasmosis is increasingly recognized as an opportunistic infection associated with the acquired immunodeficiency syndrome (AIDS). It should be considered in all AIDS patients with perplexing clinical presentations.

- Neurosonology: Its Place in Diagnostic Imaging . . . . . 579**

*Michael S. Tenner MD*

A large spectrum of pathology of the brain and spine can be imaged by ultrasound quickly, accurately, and relatively inexpensively without moving an infant from the nursery environment.

- When is it Appropriate to Prescribe Hearing Aids for Patients...and When Not? . 583**

*James M. McDonald ScD*

There are many factors which enter into the decision about why, where, and when to prescribe hearing aids. The key questions that must be answered to make this determination are outlined here.

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

### Advisory Member

Carmine M. Valente PhD

### Art Director

Virginia Carter

### Graphic Artist

Valentia McVey

### Communications Assistant

Lori Robinson

### Executive Director

Angelo J. Troisi FACHE

Communications Director

Michelle Burke MHSA

Maryland Advertising  
Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

Copyright© 1991. *MMJ* Vol 40, No 7.  
The *Maryland Medical Journal*  
USPS 332080. ISSN 0025-4363 is pub-  
lished monthly by the Medical and  
Chirurgical Faculty of Maryland and  
is a membership benefit. Subscription  
rates: U.S. and U.S. possessions, one  
year: nonmembers \$35; foreign \$42.  
Single copy: members \$5; nonmembers  
\$7. Second class postage paid at Bal-  
timore, MD and at additional mailing of-  
fices. POSTMASTER: send address  
changes to *Maryland Medical Journal*.  
1211 Cathedral St., Baltimore, MD  
21201-5585. FAX 301-547-0915.

The views in this publication are those  
of the authors and do not necessarily  
reflect the opinion of the Medical and  
Chirurgical Faculty of Maryland.  
Publishing an advertisement does not  
imply endorsement of any product or  
service offered, or approval of any rep-  
resentation made.



Medical  
and Chirurgical Faculty  
of Maryland

## MEDICAL HISTORY

### Amos A. Evans MD: Father of American Naval Medicine . . . . . 587

Seruch T. Kimble MD, FACP

Dr. Evans was the first to be appointed Surgeon of the Fleet, after having served with distinction on the frigate USS Constitution (Old Ironsides) during the War of 1812.

## DEPARTMENTS

### Epidemiology and Disease Control Program . . . 545 *Communicable Diseases . . .*

### Executive Director's Newsletter . . . . . 553

### A Clinical Moment with . . . Diabetes . . . . . 594 *Hypoglycemia . . .*

### Clinical Observations . . . . . 595 *Epstein-Barr Virus Infection . . .*

### Board of Physician Quality Assurance Actions . . 599

## MISCELLANY

### Members in the News . . . . . 542 *Tepper, Resnik, Laughlin . . .*

### Semiannual Meeting . . . . . 562

### Doctors Note . . . . . 610

### Physician's Recognition Award . . . . . 610

### Information for Authors . . . . . 612

### Classified Ads . . . . . 614

Cover: On June 23, 1991, Henry N. Wagner, Jr., MD received the American Medical Association's Scientific Achievement Award in recognition of his work in nuclear medicine. Dr. Wagner is shown here with, *Living with Radiation: The Risk, The Promise*, his most recent book which he co-authored with Linda E. Ketchum. Dr. Wagner is Director of the Divisions of Nuclear Medicine and Radiation Health Sciences, and Professor of Medicine, Radiology, and Environmental Health Sciences at The Johns Hopkins University School of Medicine.

Cover photo and design by Virginia Carter.



# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

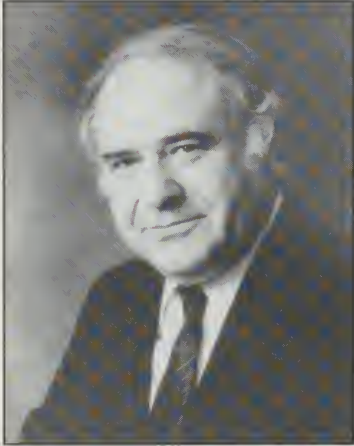
301-296-5610

(Located on the campus of Greater Baltimore Medical Center)



*Lumbar Spine*





*Marcos Tepper MD* has been named Medical Director of the new Radiation Oncology Center, which is affiliated with Baltimore County General Hospital (BCGH). A consultant in Radiation Oncology at BCGH since 1986, Dr. Tepper is a Clinical Assistant Professor in Radiation Oncology at the University of Maryland in Baltimore.

Before assuming his present position, he was head of the Division of Radiation Oncology at Sinai Hospital.

After completing medical school, Dr. Tepper served a rotating internship at Mercy-Douglass Hospital in Philadelphia, and was awarded a Radiation Therapy Fellowship at Yale University School of Medicine.

He is a member of the American Board of Radiology in Therapeutic Radiology and the American Board of Nuclear Medicine. Among his numerous medical society affiliations are the American College of Radiology, the American Society of Radiation Oncologists, and the Society of Nuclear Medicine.

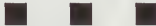


Photo courtesy of Crown Portraits, Inc.

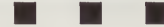
*Harvey L.P. Resnik MD*, a psychiatrist specializing in depression, was recently presented with a medal as an "Officer of the Order of King Leopold for service rendered on health matters" by the Belgian Ambassador. Dr. Resnik earned this honor by serving as a NATO Fellow in Brussels, where he studied the psychological aspects of disasters, specifically the

nuclear catastrophe at Chernobyl, and for assisting the Catholic University of Louvain to establish a new clinic to aid people who suffer from dislocation and emotional stress or substance abuse.

A prolific author (ten books, twenty book chapters, and more than thirty articles), Dr. Resnik has held academic appointments at the State University of New York at Buffalo, the George Washington University, The Johns Hopkins University, the Uniformed Services University of the Health Sciences, and the Univer-

sity of Leuven School of Medicine in Belgium. He has also served as a consultant to numerous health-related businesses, as well as American and international agencies - including the White House, the National Institute of Mental Health, and the Belgian Ministry of Health.

A Phi Beta Kappa, Dr. Resnik is a graduate of the University of Buffalo and Columbia University, and is an active member of myriad committees, councils and societies. In addition to his most recent decoration, he is a recipient of more than fifteen honors and awards.



*Henry P. Laughlin MD, ScD, ScSD*, a psychiatrist from Frederick County, MD, was recently awarded a citation from Governor William Donald Schaefer in recognition of his "outstanding service and distinguished leadership on behalf of your State and Nation... in honor of your significant contributions to the unique volunteer public service organization, CAMPER (Catoctin Area Mountain Environmental Resource), as one of the founders and original members of the Board of Directors; and as an expression of our admiration, gratitude and great respect for your long career as a dedicated civic leader..." Dr. Laughlin served three terms as President of CAMPER from 1987 to 1990. CAMPER is the four state volunteer group for Catoctin Mountain Park, site of Camp David.

Author of a score of books, he was the founder and first president of both the American College of Psychiatrists and the American College of Psychoanalysts. Currently the Associate Editor for both the *Maryland Medical Journal* and the *Physician's Practice Digest*, he has been active in the Medical and Chirurgical Faculty of Maryland since 1951, serving on numerous committees, as well as being a member of the House of Delegates and Council. A past President of both the Montgomery and Frederick County Medical Societies, he was also Vice President of Med Chi from 1964 to 1965.

Winner of countless awards and honors, Dr. Laughlin has been a Visiting Professor to sixty medical centers in the United States and overseas, as well as serving as a consultant to fourteen US agencies.



L to R. Frederick Price, President of CAMPER; Henry Laughlin MD; David Denton DED, Past President of CAMPER



# A BRIGHT IDEA TO START WITH...



**180<sup>mg</sup>**  
**Calan<sup>®</sup> SR**  
(verapamil HCl) 180 mg  
SUSTAINED-RELEASE CAPLETS

Address medical inquiries to:  
G.D. Searle & Co.  
Medical & Scientific  
Information Department  
4901 Searle Parkway  
Skokie, IL 60077

**SEARLE**

G.D. Searle & Co.  
82711-00 Chicago, IL 60691

# MGH Cancer Treatment Center



is pleased to announce  
the arrival of

Mitch Oh, M.D.  
Medical Director

*specializing in Radiation Therapy  
Treatment and Consultation*

18105 Prince Philip Drive  
Olney, Maryland 20832  
(301) 570-4907



located on the campus of  
Montgomery General Hospital

The  
**Johns Hopkins**  
Hospital 

## PHYSICAL THERAPY OCCUPATIONAL THERAPY PHYSIATRY CONSULTATION SERVICE

Providing Rehabilitation Services  
including specialties in the areas of:

### SPINE REHABILITATION

- Spinal evaluation and treatment
- Back School Education
- Postoperative back evaluation and treatment

### ORTHOPEDICS

- Postoperative joint rehabilitation
- Rehabilitation of musculoskeletal injury
- Foot Orthotic evaluation/fabrication
- Prosthetic training
- TMJ

### PEDIATRICS

- Evaluation and treatment of premature infants through adolescents
- Cystic Fibrosis Pulmonary and Exercise Programs

### NEUROSCIENCES

- Chronic Pain Management
- Evaluation and treatment of neurological disorders
- Geriatric Fall Precautions Screening
- Multiple Sclerosis Patient Screening

### MEDICINE

- Geriatric Assessment
- Arthritis evaluation and treatment
- High Risk Pregnancy
- AIDS Rehabilitation

### SURGERY

- Amputee Rehabilitation
- Early postoperative intervention
- Postoperative organ transplantation rehabilitation

### ONCOLOGY

- Rehabilitation Post Bone Marrow Transplantation
- Leukemia Rehabilitation

### CARDIAC REHABILITATION

- Postoperative intervention
- Postoperative Heart, Lung and Heart/Lung Transplant Rehabilitation
- Phase 1 Cardiac MI program

### PSYCHIATRY

- Pediatrics through Geriatrics
- Inpatient, Day Hospital, Outpatient

### HANDS

- Static and Dynamic Orthotics
- Hand Surgery/Cumulative Trauma Rehabilitation

## THE JOHNS HOPKINS HOSPITAL

For more information on our inpatient and outpatient programs contact:

**The Rehabilitation Medicine Department**

Osler 159  
600 North Wolfe Street  
Baltimore, Maryland 21205  
(301) 955-5693

# QUALITY

## THE HOPKINS TRADITION



William Donald Schaefer - Governor of Maryland



Adele Wilzack, RN, MS - Secretary  
Department of Health & Mental Hygiene

J. Mehseu Joseph, PhD - Director  
Community Health Surveillance & Laboratories Admin.

Ebenezer Israel, MD, MPH- Director  
Epidemiology & Disease Control Program

# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

July 1991.

## SELECTED COMMUNICABLE DISEASES IN MARYLAND IN 1990

This report briefly describes the epidemiology of selected communicable diseases in Maryland in 1990, reported by physicians, other health professionals, local health departments, hospitals, and laboratories. For many diseases, additional information was obtained from the case investigations done by communicable diseases coordinators in the local health departments and by hospital infection control practitioners.

The number in parenthesis after the name of each disease indicates the number of reported cases in Maryland with onset of illness in 1990. Below the disease name are the incidence rates in Maryland and the United States, both based on the 1990 census population. The cumulative number of cases reported to the Morbidity and Mortality Weekly Report (MMWR) system in 1990 (CDC. MMWR 1991, Vol. 39, Nos. 51 & 52) were used for the U.S. rate.

Changes in the Code of Maryland (COMAR) Regulations 10.06.01 Communicable Diseases, adopted effective August 7, 1989, affected several reportable diseases and conditions. Four diseases were added to the previous list: delta hepatitis, *Haemophilus influenzae* type B invasive disease (previously only *H. influenzae* meningitis was reportable), symptomatic human immunodeficiency virus infection (previously only AIDS was reportable) and Lyme disease. *Salmonella typhi* carrier became a separate category. Ten diseases were deleted: chickenpox, Guillain-Barre syndrome, staphylococcal and other infections in newborn (newborn septicemia is still reportable), influenza, relapsing fever, Reye's syndrome, smallpox, streptococcal infections (including scarlet fever), typhus and yellow fever. Even though *Campylobacter* infections, giardiasis, Guillain-Barre syndrome, listeriosis, non-cholera

*Vibrio* infections (non-01) and yersiniosis are not on the list of notifiable diseases, reports we received are included in Table 2.

Laboratory surveillance included attempts to investigate patients who had test results indicating a reportable disease but who had not been reported by a physician or hospital. This added to the number of cases of *H. influenzae* disease, viral hepatitis, legionellosis, Lyme disease, meningococcal disease, mycobacteriosis, salmonellosis and shigellosis.

Death certificates that listed reportable diseases as a cause of death were investigated, and cases were counted if confirmed by investigation.

Reportable diseases data are entered into the computer-based Maryland Electronic Reporting and Surveillance System (MERSS) and electronically transmitted to the CDC weekly for our report to the MMWR. Also, our comprehensive code system for general and disease specific variables of epidemiologic and control measure importance, allows for fast and more meaningful analysis of the data.

The completeness and accuracy of the reportable diseases depend on timely reporting from health care providers and laboratories. We are grateful for the cooperation of all those who contributed to the public health in Maryland and in the U.S. by reporting, investigating and controlling the spread of communicable diseases in 1990.

### BOTULISM, INFANT (7)

0.1/100,000 (U.S. 0.2/100,000)

Infant botulism was reported in January (1), February (1), April (1), August (1) and October (3)

from 6 counties (Table 2). The age of the cases ranged from 1 to 5 months (mean 2.6, median 3 months). Six patients were white and one was Hispanic. The male to female ratio was 3:4.

All infants required hospitalization for varied symptoms: constipation, anorexia, dysphagia, hypotonia, lethargy, respiratory insufficiency and paralysis. In six cases, the diagnosis was established by identifying botulinum toxin (type B) in the stool, and one case had an electromyograph (EMG) consistent with botulism (stool was not tested for *Clostridium botulinum* toxin). All of the infants were treated and survived.

Thorough investigation of lifetime food history, other possible exposures, and microbiological examination for *C. botulinum* and/or for *C. botulinum* toxin of miscellaneous available food that had been consumed (apple juice, prune juice, commercial infant formulas and cereals, and honey) failed to disclose the sources of infection. No common factors were found among the three cases with onset in October.

## ENCEPHALITIS, PRIMARY AND POSTINFECTIOUS (27)

0.6/100,000 (U.S. 0.5/100,000)

The number of cases by county is shown in Table 1. Dorchester (4 cases) and Talbot (2 cases) had the highest rates per 100,000 in the State (13.2 and 6.5, respectively). More than half of the patients (52.0%) had onset of illness in July, August and September with peak incidence (6 cases) in July. The ages ranged from 3 to 85 years (mean 41 years). The male to female ratio was 1.1:1.0; the ratio of whites to nonwhites was 2.9:1.0. The following infectious agents caused or were suspected to have caused encephalitis or meningoencephalitis: Herpes simplex or H. zoster (9 cases, including one post-chickenpox case), *Listeria monocytogenes* (1), and *Haemophilus aphrophilus* (1). No cause was identified for the rest of the cases. Six patients died for a case fatality rate of 22.2%.

## GONOCOCCAL INFECTIONS (23,446)

501/100,000 (U.S. 296/100,000)

Reported gonococcal infections increased over the number in 1989 (23,194) (Figure 1). The cases by county are shown in Table 1. Five jurisdictions reported the highest rates per 100,000 population: Baltimore City (1755.2), Dorchester (835.6), Prince

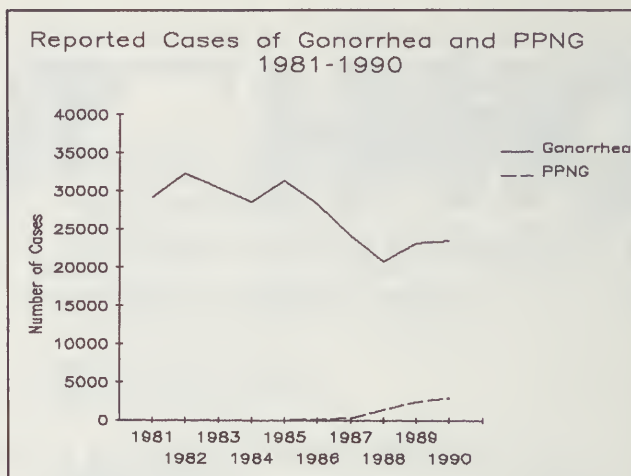


Figure 1

George's (807.8), Somerset (563.5) and Wicomico (543.2) counties. In the past decade Maryland's lowest rate (452.7) was noted in 1988 and the highest rate (765.4) in 1982.

The age distribution of the cases was similar to that in 1989: 26 percent were 15 to 19, 28 percent were 20 to 24, 18 percent were 25 to 29, 11 percent were 30 to 34 years of age. Rates per 100,000 population by age group and sex are shown in Figure 2. In 1990, among the 10,150 cases for whom race was reported, 94 percent of all males and 89 percent of all females with gonorrhea were black. The PPNG (penicillinase - producing *Neisseria gonorrhoeae*) increased by 24 percent, from 10.4 percent of all isolates in 1989 to 12.7 percent in 1990. (Figure 1).

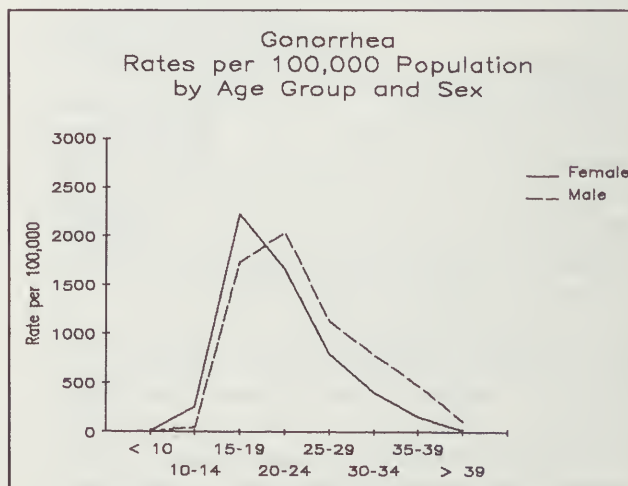


Figure 2

To be continued August, 1991



Table 1. MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 REPORTED CASES OF NOTIFIABLE DISEASES IN MARYLAND IN 1990 BY ONSET DATE

POLITICAL SUBDIVISION	RUBELLA (MEASLES)	RUBELLA (GERMAN MEASLES)	INF. PAROTITIS (MUMPS)	PERTUSSIS	VIRAL HEPATITIS				MENINGOCOCCAL INFECTIONS	H. INFLUENZAE DISEASE	MENINGITIS, VIRAL	ENCEPHALITIS	ROCKY MOUNTAIN SPOTTED FEVER	TUBERCULOSIS	SALMONELLOSIS	TYPHOID FEVER	SHIGELLOSIS	SYPHILIS, PRIMARY AND SECONDARY	SYPHILIS, CONGENITAL	GONORRHEA	ANIMAL BITES	RABIES, ANIMAL	
					A	B	NA/NB	UNSP.															
	1990	204	5	1136	90	866	545	45	13	45	57	266	27	20	384	1251	34	249	1136	81	23446	9690	468
	1989	122	2	625	96	1200	668	28	20	78	73	246	23	19	395	1495	12	276	799	19	23194	9434	389
	1988	19	1	204	43	307	691	49	47	57	122	213	18	26	466	1617	6	736	688	7	20733	9413	338
	1987	10	4	47	27	253	849	58	39	55	124	389	32	43	429	1810	8	632	597	2	24132	10524	450
	1986	35	1	34	166	198	840	84	29	52	109	275	34	23	362	1642	16	233	451	1	28299	10451	683
Population Maryland State	4,781,468																						
Baltimore City	736,014	94	-	536	16	554	192	6	4	5	6	45	1	2	122	280	1	66	189	6	13057	1503	3
Counties, total	4,045,454	110	5	600	74	312	353	39	9	40	51	221	26	18	262	971	33	183	947	75	10389	8187	465
Allegany	74,946	-	-	15	5	-	1	-	1	2	-	7	1	1	4	11	-	-	-	-	39	245	11
Anne Arundel	427,239	17	-	81	13	56	50	4	1	5	4	7	2	3	20	103	1	12	25	1	822	1285	27
Baltimore Co.	692,134	29	-	95	9	155	59	11	-	11	8	54	4	1	32	129	-	15	18	3	717	599	45
Calvert	51,372	-	-	5	1	1	6	-	1	1	1	6	-	-	20	-	-	4	-	-	117	138	18
Caroline	27,035	-	-	-	2	-	4	-	-	-	-	3	-	1	1	16	-	2	2	-	60	69	10
Carroll	123,372	1	-	11	-	9	13	3	-	1	-	7	-	-	4	31	-	7	3	-	56	328	12
Cecil	71,347	-	-	4	1	-	11	1	-	1	3	2	-	-	-	21	-	1	1	-	64	358	24
Charles	101,154	4	-	12	-	-	1	1	-	-	3	4	2	1	1	20	-	6	30	2	237	244	8
Dorchester	30,236	-	-	-	10	1	7	1	-	-	-	-	4	-	5	15	-	-	33	2	249	53	-
Frederick	150,208	-	-	5	1	4	11	1	3	1	4	-	-	-	-	23	-	23	13	1	295	473	28
Garrett	28,138	-	-	-	1	1	-	-	-	-	2	3	1	-	-	-	-	-	-	-	3	92	45
Harford	182,132	5	-	7	-	24	19	3	2	1	2	5	1	2	7	60	-	3	2	-	125	440	41
Howard	187,328	7	-	6	4	16	13	-	1	3	1	5	-	1	3	31	-	5	3	-	112	326	14
Kent	17,842	-	-	1	-	-	1	-	-	-	1	1	-	1	2	6	-	-	2	-	9	25	57
Montgomery	757,027	12	3	35	10	29	56	3	-	3	6	40	4	1	83	167	25	41	73	1	772	1472	23
Prince George's	729,268	35	1	281	11	11	81	4	-	9	16	50	2	5	77	140	6	62	638	58	5602	999	41
Queen Anne's	33,953	-	-	1	-	-	3	1	-	-	-	4	-	-	-	7	-	-	-	-	35	123	41
Saint Mary's	75,974	-	-	-	-	-	1	-	-	-	-	1	-	-	-	8	-	-	10	2	151	194	4
Somerset	23,440	-	-	34	-	1	1	1	-	-	-	2	-	-	3	41	-	1	5	2	111	77	-
Talbot	30,549	-	-	1	5	-	3	-	-	-	-	1	2	-	1	22	-	-	6	-	77	81	-
Washington	121,393	-	1	3	-	3	6	-	-	-	-	10	3	-	2	37	1	-	4	-	210	148	16
Wicomico	74,339	-	-	1	1	-	4	5	-	-	1	7	-	-	13	52	-	4	60	1	402	318	-
Worcester	35,028	-	-	2	-	1	2	-	-	1	-	2	-	1	4	9	-	1	11	2	124	100	-
STATE TOTALS																							

STATE TOTALS

POLITICAL SUBDIVISION

**TABLE 2. OTHER REPORTED DISEASES IN MARYLAND WITH ONSET IN 1990**

DISEASE	MD TOTAL	JURISDICTION OF RESIDENCE OF CASES
AIDS	788	AA-27, B.City-441, Bal-41, Carr-3, Cec-1, Ch-6, Fr-3, Har-7, How-12, Mont-64, PG-130, QA-2, Som-3, Tal-1, Wash-1, Wic-9, Wor-4, prisons-33
Amebiasis	8	AA-2, B.City-1, Bal-1, Dor-1, Kent-1, PG-2
Botulism, infant	7	AA-1, Bal-1, Har-1, Mont-2, PG-1, Wash-1
Campylobacter infection	128	AA-20, B. City-38, Bal-1, Carol-5, Carr-18, Ch-6, Fr-5, How-3, Mont-8, PG-11, QA-3, Tal-2, Wash-2, Wic-3, Wor-3
Giardiasis	58	AA-10, B. City-17, Bal-1, Cal-1, Carr-2, Cec-4, Ch-1, Dor-1, Har-5, How-1, Mont-2, PG-2, QA-1, StM-3, Som-1, Tal-2, Wic-2, Wor-2
Guillain-Barre' syndrome	4	B. City-3, How-1
Kawasaki disease	17	AA-3, B. City-1, Har-1, How-1, Mont-5, PG-5, StM-1
Legionellosis	48	AA-1, B. City-4, Bal-7, Cal-1, Dor-1, Fr-3, How-1, Kent-1, Mont-5, PG-4, StM-1, Wash-16, Wic-2, Wor-1
Leprosy	1	B. City-1
Leptospirosis	1	How-1
Listeriosis (bacteremia)	3	B. City-1, Har-1, Tal-1
Lyme disease	242	Al-1, AA-28, B. City-12, Bal-39, Cal-8, Carol-3, Carr-5, Cec-15, Ch-23, Dor-1, Fr-3, Har-28, How-10, Kent-9, Mont-13, PG-10, QA-10, StM-5, Tal-1, Wash-3, Wic-6, Wor-9
Malaria	57	AA-1, B.City-5, Carol-1, Carr-1, Fr-1, Har-1, Mont-27, PG-18, Som-1, Wic-1
Meningitis, bacterial, other*	141	AA-10, B. City-60, Bal-14, Cec-3, Ch-3, Dor-1, Fr-1, Har-3, How-3, Mont-13, PG-16, StM-3, Tal-1, Wash-4, Wic-1, Wor-5
Mycobacteriosis	473	Al-2, AA-38, B.City-117, Bal-35, Cal-6, Carol-2, Carr-1, Cec-3, Ch-1, Dor-3, Fr-11, Har-4, How-1, Mont-124, PG-102, StM-2, Som-2, Wash-2, Wic-13, Wor-4
Newborn, infections	30	AA-2, B. City-2, Bal-7, Carol-1, Har-7, Mont-3, PG-3, StM-1, Wic-4
Plague	1	PG-1
Psittacosis	2	Fr-1, PG-1
Rocky Mountain spotted fever	20	Al-1, AA-3, B. City-2, Bal-1, Carol-1, Ch-1, Har-2, How-1, Kent-1, Mont-1, PG-5, Wor-1
Typhoid fever	34	AA-1, Mont-25, PG-6, Wash-1
S. typhi carrier	1	Mont-1
Vibrio (non-01)	6	B. City-3, Har-1, Mont-2
Yersiniosis	39	AA-5, B. City-16, Cal-2, Cec-1, Ch-1, Dor-3, Fr-8, Mont-1, PG-1, Wash-1

\* excluding *N. meningitidis* and *H. influenzae* meningitis



### **TAX-DEFERRED ANNUITIES\***

- *Competitive rates of interest*
- *Tax-deferred interest until withdrawn*
- *Safety of investments*
- *Access to income*
- *Rate guarantees for 1-3-5 years*

**CALL TODAY!**

### **You Need More Security Than Social Security...**



INVESTMENTS OFFERED AT  
**REISTERSTOWN FEDERAL SAVINGS BANK**  
Through Time Financial Services, Inc.

CALL KATHY WALDER or  
LAURA WORM  
at 833-2693, EXT. 221 or 220

### **LONG-TERM HEALTH CARE\***

- *Flexible coverage*
- *Guaranteed renewable*
- *Inflation protection available*
- *Lifetime benefit options*
- *Protection for Alzheimer's disease*





**CALL TODAY!**

\* Contracts are protected by the legal reserves of the issuing insurance company and are not FDIC insured.



## **PHYSICAL THERAPY**

Specializing in treatment for pain of the neck and back.

-  Prompt scheduling for your patients
-  Narrative reports sent to each referring physician
-  State-of-the-art facility, featuring isokinetic evaluation and exercise equipment
-  Therapy provided as prescribed

We welcome the opportunity to serve your patients

### **PYRAMID HEALTH SERVICES, INC.**

Robert J. Varley, P.T.

1001 North Point Boulevard • Baltimore, MD • 301-282-9259

Marcos Tepper, M.D.  
and staff



are pleased to announce  
the opening of

**BCGH  
Radiation Oncology  
Center**

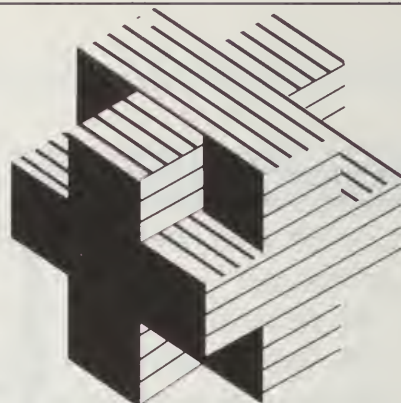
*specializing in Radiation Therapy  
Treatment and Consultation*

at

3400 Barry Paul Road, Suite 6  
Baltimore, Maryland 21133  
(301) 521-7190



(adjacent to the campus of  
Baltimore County General Hospital)



**TeamCare**  
Infusion Management Services

TeamCare is a clinically  
specialized provider of  
infusion therapy  
services to long term  
care facilities, hospitals  
and patients at home.

From clinical office  
programs to managed  
care clients, we offer  
service intensive programs  
in pediatrics, oncology  
infectious diseases and  
nutritional support.

Baltimore, MD  
(301) 498-8928

Washington, DC  
(301) 989-0300

Tidewater, VA  
(804) 473-0304

Philadelphia, PA  
(215) 938-7390

When you can buy  
any home, here's  
why you'll choose  
a Villager.



**1.** Villager  
offers the  
finest homesite  
locations—in Green Spring Valley  
communities as well as Worthing-  
ton Park and the Falls Road corri-  
dor. We'll also build your home on  
your lot... with our plans or yours.

**2.** Breathtaking estate-size  
home designs, and the rep-  
utation for using the very finest  
materials and craftsmen.

**3.** The oppor-  
tunity to  
work one on one

with our designers. We'll custom build  
from your designs or from ours. Our  
new 1991 designs include the Euro  
Classic I Award of Excellence recip-  
ient from the Homebuilders Associa-  
tion of Maryland and the next genera-  
tion of our Euro Classic series. Call  
now. We're building just a few homes  
for 1991, from \$325,000 to over  
\$700,000. Phone Sandy Marenberg or  
Karen Pine for a personal consultation.

Ruxton—Knollcrest Farms at Hillstead and Huntspring  
Pikesville—Helmsley Court Owings Mills—Worthington Park



**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

**Brokers  
Protected**

McDonough Crossroads Office Park

20 Crossroads Drive, Suite 113 • Owings Mills, MD 21117  
Phone: (day) 363-0963 (evening) 602-0820





# Meet the new team in town.

Maryland General Hospital of Baltimore has teamed up with Bryn Mawr Rehab of Malvern, Pennsylvania, one of the premier physical medicine and rehabilitation facilities in the country to form *Maryland General-Bryn Mawr Rehab Center*.

The new center, staffed by 50 of the finest rehab physicians, therapists, nurses and clinical specialists in the area, will offer the highest quality, comprehensive inpatient and outpatient rehabilitation services.

*Maryland General-Bryn Mawr Rehab Center* features 33 inpatient rehab beds with 15 devoted

to brain injured patients and 18 designated for orthopedic and neurological rehabilitation. Outpatient services are available at the Maryland General Campus in Baltimore and at our satellite health care centers in the neighboring communities of Catonsville and Timonium.

We invite you to meet the new team in town. Call Mary Filippelli, our Administrative Director at (301) 225-8380 to get all the details and to arrange for a tour of our new facility.

*Maryland General-Bryn Mawr Rehab Center*. When it comes to rehab care, we're strictly major league.



MARYLAND GENERAL  
BRYN MAWR REHAB CENTER

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380

# You Will Affect the Future of Medicine



## The Medical Manager® can affect the future of your practice.

The nation's #1 selling software (more than 10,000 systems installed nationwide) helps you in numerous ways.

- ◆ Filing claims electronically means you get payment faster.
- ◆ Increases staff efficiency.
- ◆ You have automated recall notices.
- ◆ Patient demographic data can help your practice grow.

The Medical Manager® is available for as little as \$250. per month on a lease/purchase option.

Call and we'll come to your office, review your needs, and prepare purchase and lease estimates with NO OBLIGATION. Once we install The Medical Manager®, we'll train your staff and provide *on-going support* when you need it.

**CALL TOLL FREE**  
**1 (800) 776-2454**

**P · R · I · S · M**  
MEDICAL SYSTEMS

Baltimore, MD  
(301) 494-0992

Fairfax, VA  
(703) 359-0777

Richmond, VA  
(804) 330-9225

Winchester, VA  
(703) 662-4545

The Medical Manager® is marketed nationally by Systems Plus, Inc., a California corporation. Systems Plus, Inc., is a registered trademark of Systems Plus, Inc. The Medical Manager® is a registered trademark of Personalized Programming, Inc.



# Executive Director's Newsletter

July 1991

## 1991 Semiannual Meeting

Med Chi's Semiannual Meeting will be held Friday, Saturday and Sunday, September 13, 14 and 15, at the Carousel Hotel and Resort on the beach at 118th Street in Ocean City, Maryland. U.S. Surgeon General Antonia Novello MD will be the special guest speaker. AMA Trustee Robert McAfee is also invited to attend the meeting. In addition, Med Chi physicians will discuss several important medical issues including:

- Practice protocols for physicians with HIV,
- Radiation technologist regulations, and
- Accreditation for mammography screening.

All preregistrants are guaranteed a room with an oceanfront view at a reduced rate. For room reservations, call the Carousel Hotel at 301-524-1000. Please specify that you are registering for the Med Chi Semiannual Meeting.

Physicians are encouraged to complete the preregistration form below.

**REGISTRATION FORM**  
Med Chi Semiannual Meeting / September 13-15, 1991  
Carousel Hotel and Resort / Ocean City, Maryland

<b>Med Chi Members - No charge</b>	<b>Non-Members - \$35.00</b>
------------------------------------	------------------------------

Name: \_\_\_\_\_  
(Please Print)                      Last                                      First

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Component Society (County): \_\_\_\_\_

Maryland License No.: \_\_\_\_\_

**Form of Payment**

☐ Check (payable to Med Chi)                      ☐ Visa                      ☐ Mastercard

Credit Card No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Return this Registration Form and your payment to:

Med Chi Conventions

1211 Cathedral Street / Baltimore, MD 21201-5585

For additional information, call 539-0872 from the Baltimore area  
or 1-800-492-1056 from elsewhere in Maryland.

## Medicare Secondary Payer Guidelines

In certain situations, Medicare is not the primary insurer for Medicare beneficiaries. Some of these situations are:

### Working Aged

The Medicare beneficiary (65 or older) or his/her spouse (any age) is employed with an employer group health plan of 20 or more employees. (Effective 1/1/83)

### Disability

The Medicare beneficiary (under 65) or a family member is employed with a large group health plan of 100 or more employees. (Effective 1/1/87)

### Workers Compensation

The Medicare beneficiary (any age) is involved in a work-related injury. The workers' compensation carrier should be billed for work-related injuries.

### Automobile Accident

The Medicare beneficiary (any age) is involved in an automobile accident. Bill

the automobile insurance company for automobile accident injuries first, then bill Medicare for secondary benefits.

If you determine that a claim has been denied improperly because a Medicare beneficiary has retired and/or group health insurance offered by a former employer has terminated, you should submit an Information Request Form supplying that information to: The Medicare Secondary Payer Department, 1946 Greenspring Drive, Timonium, Maryland 21093

---

## *Medicare Promotes Correct Coding of Physician Services*

---

Med Chi has asked HCFA for input regarding various aspects of the new Medicare regulations. Med Chi is pleased that HCFA's Regional Administrator, Maurice Hartman, has developed the following which is provided for your information:

The new Medicare physician fee schedule, which replaces the reasonable charge mechanism in place since 1966, is just around the corner! While the effective date is January 1, 1992, HCFA has already taken certain measures to standardize the way payments are processed by the 34 Medicare carriers around the country.

One practice in need of standardization involves the variations in Health Care Procedure Coding System (HCPCS) coding used to bill identical services. This was particularly true for surgical services. A common billing error found was the reporting of two codes when one of the codes actually encompassed the full scope of the services provided. Another problem was reporting two or more codes, when there was already a single code that combined all of the procedures. Medicare does not make separate payments for procedures that are components of a more comprehensive group of services.

Carriers are required by regulation to insure that claims are paid appropriately and, if errors are later found, to take appropriate corrective measures. Therefore, in order to insure correct coding, computerized edits were instituted at all Medicare carriers during February 1991 to identify billings that do not conform to the new requirements.

As an example, one of the edits currently in place will deny code 29870 (Arthroscopy, knee, diagnostic, with or without synovial biopsy) when billed in conjunction with code 29875 (Arthroscopy, knee, surgical; for infections, lavage and drainage synovectomy, limited). Carriers sent educational bulletins in January to notify physicians of the specific codes which will be rebundled into a more comprehensive code when billed for the same patient on the same date of service. When incorrect combinations of codes are billed to Medicare, payment will be made only for the more comprehensive procedure. Payment will be denied for the other code or codes.

The initial edits are working smoothly. A second set of code edits, possibly as many as 500 edits, will become effective in early summer. These edits are being developed in consultation with the AMA and specialty societies.

Before the second edits are in place, Medicare carriers will again send a list to physicians of the correct codes and those which will be denied. The carriers will examine a sample of past claims before the coding changes are implemented. Those physicians who have a high volume of incorrectly coded claims will be contacted by the carrier.

If you should receive a notice of improper billing, you may want to first check that the problem was not the result of a keying error, either on your part or on the part of the carrier. If it is, the carrier should be contacted. If not, then check the CPT-4 book or the carrier's bulletin to see if in fact a single code does fully and completely describe the actual services performed. Carriers are available to work with you to resolve any problems or concerns in specific situations.

The standardization of correct coding procedures will not only insure uniform Medicare payment amounts in the present, but will also allow the development of an equitable fee schedule for the future.

Maurice Hartman  
Regional Administrator  
Health Care Financing Administration

---

## *DEMPAQ*

---

Under a Congressional mandate to extend PRO (professional review organization) review to physician offices, the Health Care Financing Administration (HCFA) has contracted with Delmarva, the Maryland PRO to develop, test, and evaluate



several different review methods before they are carried out on a national scale. By testing the feasibility of reviewing the care received by Medicare patients in physicians' offices prior to widespread implementation of a review program, the federal government is giving physicians an opportunity to contribute to the development of a potentially important review tool. For additional information on DEMPAQ (Development and Evaluation of Methods to Promote Ambulatory Care Quality), see the August 1991 issue of the *MMJ*.

The DEMPAQ project coordinators at Harvard University have provided the following information which emphasizes education and feedback to physicians and concentrates on the quality of care rendered in office settings. Physicians will receive confidential feedback as to how their practice patterns compare to those of their peers. They will also have the chance to evaluate the usefulness and value of the review, and to offer suggestions on how to revise and improve both the review instrument and the review process.

DEMPAQ researchers at the Harvard School of Public Health, The Johns Hopkins University, and the Park Nicollet Foundation are developing the methods to provide the feedback: a medical record review and a claims profiling instrument. The record review includes appraisals of record documentation adequacy and of clinical performance. The claims profiling part of the project uses HCFA-1500 Part B data to prepare profiles of clinical interest to physicians.

Consultants have been recruited from several Maryland groups including Dr. Robert Ruderman from Med Chi, Dr. Joseph Zebley from the Maryland Academy of Family Practice, and Dr. Park Espenschade from the Maryland Society of Internal Medicine.

Beginning in July, letters will be mailed to a random sample of Maryland physicians inviting them to participate in the project. Participating physicians will be asked to provide a randomly selected sample of approximately 25 patient records to DEMPAQ for review. All information submitted will be strictly confidential and will be reviewed by project staff only. To cover the costs of processing and mailing the records, a payment for each photocopied record will be offered.

Results of the Maryland pilot will be carefully studied and used to revise the criteria so that they provide practical and useful feedback to physicians on their practices. The researchers anticipate completing this revision prior to initiating the record review in two other states in the winter of 1991-1992. Claims profiles will be developed and released in mid-1992, first in Maryland and then later in Iowa and Alabama. The project's final report will be available in the fall of 1993.

---

## *Licensure Renewal*

---

The Board of Physician Quality Assurance will be mailing out licensure renewal forms to physicians with last names beginning with M-Z on or about June 30, 1991. The packets will include the standard Part A and a new Part B. Both forms are to be completed and returned to the Board by September 30, 1991 for processing.

The new Part B form is the result of a cooperative effort with the Maryland Health Resources Planning Commission. The information collected will assist the Commission in creating a statewide data base that will assist in manpower and primary care resource planning. Timely completion of these forms will avoid the necessity of enforcing compliance through regulations.

---

## *Medical Mutual Seminar Offers 5% Premium Discount*

---

Medical Mutual has announced it will offer its subscribers a 5 percent discount on their 1992 Medical Mutual renewal premium for attending "Medical Records: Charting a Course for the 90s." This seminar, which is designed to provide physicians with a basis for quality assurance within the medical practice, covers both basic and legal principles of recordkeeping and offers practical applications for risk management. Med Chi is cosponsoring the course which is designated for 3 credit hours in Category 1 of the Physician's Recognition Award of the AMA. The seminar will be given through September and sessions will be held at Medical Mutual, Med Chi, and a number of other locations around the State. Each seminar

runs from 5:00-9:00 p.m. Registration and a light supper begin at 5:00 and the seminar starts at 5:30 p.m. The fee for the seminar is \$40.00 per person. For more information, please call Natalie Harper or Roz Laakso at Medical Mutual at 301-785-0050 or 1-800-492-0193.

"Medical Records: Charting a Course for the 90s"

Remaining Seminar Dates and Locations

July 9 and 15	Medical Mutual	Hunt Valley
July 18	Physician's Memorial Hospital	La Plata
July 24	Medical Mutual	Hunt Valley
July 31	Carroll County General Hospital	Westminister
August 1	Peninsula General Hospital	Salisbury
August 6 and 14	Medical Mutual	Hunt Valley
August 15	Columbia/Freestate	Columbia
August 19	Doctors' Community Hospital	Lanham
August 22	Colony South Hotel	Clinton
August 28	Liberty Medical Center	Baltimore
September 4	Prince George's Hospital Center	Cheverly
September 5 and 11	Medical Mutual	Hunt Valley
September 12	Washington Co. Hospital Assn.	Hagerstown
September 14	Med Chi Semiannual Meeting	Ocean City
	Carousel Hotel and Resort (8:30 a.m.-12:00 noon)	
September 16	Tidewater Inn	Easton
September 17	Med Chi	Baltimore
September 19	Holy Cross Hospital	Silver Spring
September 23	Union Hosp. of Cecil County	Elkton
September 24	Columbia/Freestate	Columbia
September 25	North Arundel Hospital	Glen Burnie
September 26 and 30	Medical Mutual	Hunt Valley

---

*Second Annual  
Conference on  
Addiction and  
Physician Health*

---

Med Chi's Physician Rehabilitation Committee and the Committee on Alcoholism and Chemical Dependency are planning a Second Annual Conference on Addiction and Physician Health for Saturday, November 16, 1991 at the Med Chi Faculty Building. Topics for the conference are slated to include helping your patients stop smoking, recognizing the role of the primary care physician in the treatment of chemical dependence, and using traditional addiction approaches in the treatment of eating disorders. The conference is scheduled to fulfill eight category 1 CME credits. Watch the *MMJ* for registration forms and more information about this upcoming program.

---

*Physician's  
Practice Digest*

---

The summer 1991 issue of the *Physician's Practice Digest* is scheduled to be released July 1, 1991. This issue will focus on HMOs in Maryland and will contain a recap of the 1991 legislative session. For more information on the publication, contact Michelle Burke, Director of Communications at 301-539-0872 or 1-800-492-1056.

---

*Protocol for  
Physicians with  
HIV*

---

Recently, Governor William Donald Schaefer signed Senate Bill 203 requiring that, "The Medical and Chirurgical Faculty of Maryland, in consultation with the Centers for Disease Control, the Maryland Hospital Association (MHA), and the Department of Health and Mental Hygiene, shall develop a practice protocol for physicians who are infected with HIV." The Med Chi Committee on AIDS, in conjunction with the AIDS Administration and the MHA, is currently developing a draft protocol for HIV-infected physicians. A hearing for physicians wishing to comment on the draft protocol will be held July-August, 1991 (dates to be announced). If you are interested in attending these meetings, please contact Betsy Newman, Public Relations Director, at 301-539-0872 or 1-800-492-1056.

  
Angelo J. Troisi, F.A.C.H.E.  
Executive Director



# P.I.E.'s quality rating insurance program isn't for everyone, but it might be the best policy for you.

When it comes to professional medical liability insurance, one size doesn't fit all. If it did it would be too expensive. P.I.E. Mutual Insurance Company's Quality Rating Insurance Program (QRP) is designed to provide the best coverage for the best doctors at the best rate.

## **QRP FACTS:**

**Strict Underwriting Criteria** — Not every applicant will qualify, but those who do will enjoy a substantial savings in premium costs. And they will reap the benefits of stable premiums in a volatile malpractice environment.

## **Scheduled Premium Reductions** —

Beginning in the second year, doctors who experience no payable loss will earn premium discounts, which can add up to a 30% reduction in premium costs over a five-year period. Insurance rates of individual members in a group practice are not affected by losses incurred by other members.

**High Limits** — Backed by our reinsurer, Lloyd's of London, P.I.E. is able to offer higher coverage limits for qualifying doctors: up to

\$7 million for individual doctors and \$13 million for group policies. Lloyd's of London is the largest reinsurer in the world.

**Designed With Input from Doctors** — P.I.E.'s QRP plan is an innovative modified claims-made insurance specially designed with input from P.I.E.-insured doctors. Our claims-made program has taken the sting out of the tail endorsement. No additional premium is charged for an extended reporting endorsement, provided the physician does not leave the state to practice, or does not change insurance companies.

Do you qualify? Contact your P.I.E. representative, or our headquarters office today.

---

THE P.I.E. MUTUAL

---

INSURANCE COMPANY

---

North Point Tower • 1001 Lakeside Ave. • Suite 1800  
Cleveland, OH 44114-1149 • (216) 736-8400 • (800) 228-2335

---

**Winterich • Neff & Associates**  
7 East Redwood • Suite 810  
Baltimore, Maryland 21202  
(301) 234-2800



# AIM HIGH



## BE AN AIR FORCE PHYSICIAN.

Become the dedicated physician you want to be while serving your country in today's Air Force. Discover the tremendous benefits of Air Force medicine. Talk to an Air Force medical program manager about the quality lifestyle, quality benefits and 30 days of vacation with pay per year that are part of a medical career with the Air Force. And enjoy the satisfaction of a general practice without the financial and management burden. Today's Air Force offers an exciting medical environment and a non-contributing retirement plan for physicians who qualify. Learn more about becoming an Air Force physician. Call

**USAF HEALTH  
PROFESSIONS  
COLLECT  
(301)981-7897**





---

# Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award

Michelle Burke MHSA and Betsy Newman

*Ms. Burke is Director of Communications and Ms. Newman is Public Relations Director, Medical and Chirurgical Faculty of Maryland, Baltimore, MD.*

In a recent interview, Dr. Wagner responded to questions about his background and activities in his specialty area, nuclear medicine.

---

*"The only effective defense against nuclear weapons lies within the human mind. Perhaps, by studying the workings of the mind, biology can help us save ourselves."*

---

*Interviewer:* What has been your reaction to being chosen for the American Medical Association's (AMA's) Scientific Achievement Award?

*Wagner:* I am delighted. I particularly value the award because it was given by the AMA -- by people who are in the front lines of the practice of medicine. It is wonderful to think that procedures we have developed and things we have learned are helping patients. I am proud to receive the award in the name of so many colleagues with whom I have worked for decades.

*Interviewer:* What do you think about the future of nuclear medicine? How are you planning for that future?

*Wagner:* Nuclear medicine still has the excitement of a new specialty, since it was only accepted as a medical specialty in 1971. In essence, the field deals with molecular medicine -- that is, the chemistry of the body in health and disease. For example, it is concerned with the relationship between behavior and brain chemistry, and the effects of drugs on diseases such as brain tumors and mental illness. We use radioactive tracers to measure the site and rate of chemical processes in every organ of the body. The future of the field is excellent. We have the unique ability to see our own atoms and molecules in action.

*Interviewer:* How has the field changed since it started?

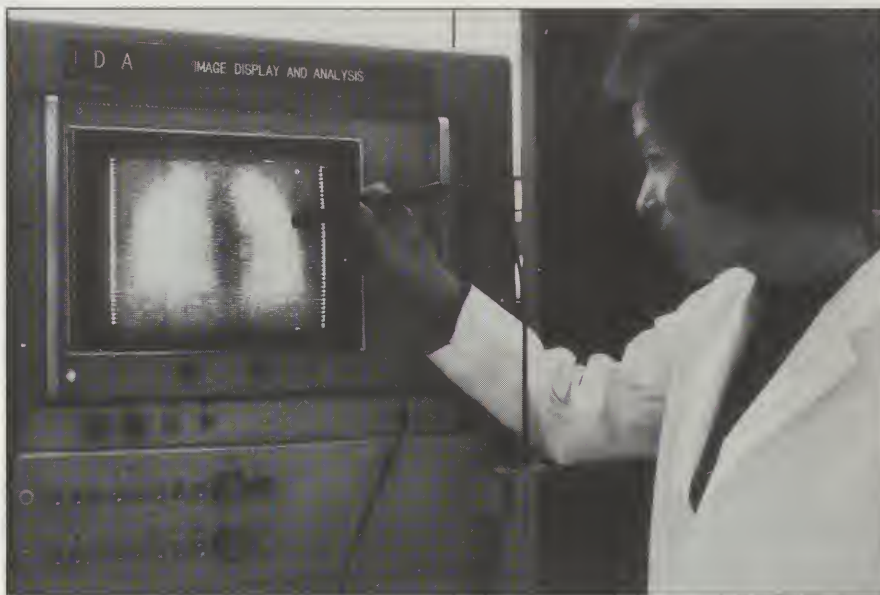
*Wagner:* Right after World War II, radioactive carbon-14 and tritium were released for use in biomedical research, leading to the development of biochemistry as we know it today. However, these two tracers can be used to study only body fluids and experimental animals. Today, we have developed other radioactive atoms (carbon-11, fluorine-18, iodine-123, and technetium-99m) which make it possible to study the chemistry of body organs in living

human beings. The two techniques of positron emission tomography (PET) and single photon emission computed tomography (SPECT) are developing at a logarithmic rate of growth; they provide new radioactive molecules with which we can better explore living chemistry. These radioactive tracers can be thought of as *in vivo* molecular probes.

*Interviewer:* How did you end up in the field of nuclear medicine?

*Wagner:* I got into the field when it was just beginning. A lot of my professors and colleagues advised me not to do so, but I am very glad I did. When I entered the field in 1958, nuclear medicine was in its infancy, but it has grown steadily since then. In those early days, we had to make our own radioactive tracer molecules, but now industry is heavily involved in the development of radiopharmaceuticals and complex imaging instruments. Cyclotrons are becoming widespread in medicine throughout the world.

I am a strong believer in the role of chance in one's life. Literally, the flip of a coin headed me in the direction of nuclear medicine. While I was working at the National Institutes of Health (NIH) in 1956 and 1957, A. McGehee Harvey, Chairman of Medicine, selected Wilbur Madison and me to be Chief Residents on the Osler Medical Service. He told us we could decide who



Dr. Wagner, along with DC Sabiston Jr. and JG McAfee, developed the first lung scanning procedure for diagnosis of pulmonary embolism.

would go first. Wilbur won the toss, so I went to England for a year. While there, I saw for the first time how studies with radioactive tracers could provide information that could help solve the problems of many of the patients I had seen up to that time. When I returned to Johns Hopkins in 1958, I began to carry out liver scans of patients with cancer and other diseases of the liver during my period as a Chief Resident in Medicine. I then joined John McAfee in establishing the Division of Nuclear Medicine at Hopkins in 1959.



A.M. Harvey M.D. (above) greatly influenced Dr. Wagner and taught him the importance of the patient as a person.

*Interviewer:* Is there anyone in particular who has influenced you and your research?

*Wagner:* When I was an undergraduate, I worked for the late Dr. Curt Richter in the Department of Psychiatry at Hopkins. He showed me what tremendous fun it was to carry out biomedical research. Although he and Dr. Horsley Gantt taught no formal courses, they were both selected during the twenty-fifth reunion of my medical student class to be with us, because they had been the most effective teachers. Of course, I was also greatly influenced by Professor A.M. Harvey who taught me the importance of the patient as a person, and the importance of detailed examination of the patient and analysis of all the data related to his or her illness. Alfred Blalock, Chairman of the Department of Surgery when I was a student, also inspired me to enter





Dr. Wagner's trainees at The Johns Hopkins Nuclear Medicine Division include renowned specialists from around the world. Pictured above are Japanese Alumni.

academic medicine as a career, rather than going into private practice.

*Interviewer:* When did you first decide to become a physician?

*Wagner:* I grew up near Bon Secours Hospital in Baltimore and was familiar with how doctors and nurses helped people. In my second year at Calvert Hall High School, I broke my arm while roller-skating and showing off with a neighborhood girl. I was so impressed with my care that I decided to try to become a doctor. I also was influenced by reading a lot of "doctor books" such as those by Paul DeKruif. I could walk to the downtown Enoch Pratt Library from our house in west Baltimore.

*Interviewer:* What has been your greatest satisfaction during your career?

*Wagner:* Like any teacher, my greatest joy is seeing the accomplishments of former students. Many leaders of American and international nuclear medicine have studied at Hopkins, and I am very proud of them and their accomplishments. For example, over sixty Japanese have studied nuclear medicine here. The first three to train in nuclear medicine at Hopkins have become Department Chairmen at Tokyo University. Four of our trainees have been Presidents of the Society of Nuclear Medicine, the leading professional organization of nuclear medicine. One of my colleagues from Harvard has stated that attending a Hopkins alumni meeting, held every year at the annual Society of Nuclear Medicine meeting, is like a "Who's Who" of world nuclear medicine.

One of my favorite philosophers, William James, said, "What doctrines students take from their teachers are of little consequence provided they catch from them the living, philosophic attitude of mind, the independent, personal look at all the data of life, and the eagerness to harmonize them."

I am also pleased that the field of nuclear medicine is

now an accepted part of medicine throughout the world, and is certain to increase its influence in the future. This is partly the result of the activities of the International Atomic Energy Agency started in 1953 by President Eisenhower.

As I said, nuclear medicine is *in vivo* chemistry, and we exist through the interactions of billions and billions of molecules interacting in the water and fat environment of our bodies.

*Interviewer:* What is the direction of your current research?

*Wagner:* My colleagues and I are making a lot of progress in the study of the relationship between behavior and brain chemistry. We are

not only studying illnesses such as cancer, epilepsy, mental illness, and the like, but also the brain chemistry of normal mental processes. Someday we may learn the brain chemical changes behind violent behavior, destructiveness, and the craving to take illicit drugs. Perhaps the only real alternative to war is a better understanding of the chemistry of the brain.

*Interviewer:* Do you use animals in your research?

*Wagner:* We have developed numerous new procedures in nuclear medicine which are in widespread use in the diagnosis of infections, pulmonary embolism, coronary artery disease, kidney diseases, and many



Dr. Wagner as President of the World Federation of Nuclear Medicine and Biology.





Dr. Wagner instructs Chinese physicians on the use of the "nuclear stethoscope," an instrument developed at Johns Hopkins.

others. All of them were based on test tube studies, followed by extensive animal studies, prior to their use in human beings. Although I have personally used myself as an experimental subject on many occasions (including the world's first lung scanning and imaging of neuroreceptors in the brain), all of our work depends on initial studies in animals. Our research that has been directly beneficial to human beings would have been impossible without animal studies, extending from rodents through dogs and baboons, then to studies in normal persons, and finally, to patients.

*Interviewer:* What are your plans for the future?

*Wagner:* I hope to continue to do re-

### Henry N. Wagner MD

According to Henry N. Wagner MD, the desire for recognition of accomplishments, together with an insatiable curiosity, are common attributes among many research scientists. The former trait was apparent in Dr. Wagner as early as age seven when he spent his summers at Camp St. Martin in Love Point, Maryland. "Competition and recognition were the hallmarks of the life at the Camp during the summer," recalls Dr. Wagner. Although he spent his days playing basketball, volleyball, softball, and swimming, Dr. Wagner believes these activities helped him learn discipline. "One of the first things we learned at camp was to run immediately to a counselor whenever he blew his whistle. We were rewarded for compliance, punished for disobedience and, as a result, we developed the habits and standards that would last a lifetime."

As a young man, Henry Wagner applied the principles he learned at camp to his studies at Calvert Hall. He recalls the high emphasis placed on excellence and would confide his shortcomings to the chaplain of Calvert Hall, Father Henry Louis Brianceau. "Occasionally, he would respond to the recitation of a sin by saying 'You didn't do that,' and I would have to persuade him that I did," says Dr. Wagner who admits, "Sometimes I would go to confession before going to confession." He was valedictorian of his class and received the highest awards in history and religion.

Upon graduation, Dr. Wagner entered the wartime accelerated program at The Johns Hopkins University. During his first year, he studied English, German, physics, chemistry, and mathematics. Years later, he learned that he had covered two years in one. Following his eighteenth birthday, Dr. Wagner entered the Coast Guard Academy. As an underclassman and a swab, he learned seamanship, navigation and, most importantly, how to take orders. He contends his experiences in the Coast Guard taught him that authority does not always have the correct answers; a rationale he maintains helped him to achieve prominence as a researcher. One year later, the atomic bomb was dropped on Hiroshima and Nagasaki and World War II ended.



As a young man, Henry N. Wagner was profoundly influenced by his experiences at summer camp in Love Point, MD.

Shortly after the war, Dr. Wagner returned to Johns Hopkins to begin his extensive medical training. "I clearly



search, write articles and books, give talks, and promote the field of nuclear medicine. I am also pleased to be a member of the Council on Scientific Affairs of the AMA, where I can help the AMA retain its eminence in medical science as well as medical practice.

Within a year, by Hopkins regulations, I must give up my administrative responsibilities at Hopkins, but hope that my creativity and participation in medicine can continue for many more years. I am engaged in a number of NIH grants that will help make this possible. There is still a shortage of physicians, technologists, chemists, and physicists in nuclear medicine.



The Nuclear Medicine Division at Hopkins was the first to image neuroreceptors in the brain of a living human. Dr. Wagner was the subject and the principal investigator in this study of brain chemistry. Pictured above is a PET scan image of Dr. Wagner's brain during the first imaging of opiate receptors in a human being.

remember Dean Alan Chesney telling us pre-medical students that medicine was in a period of great change," says Dr. Wagner. "He said medicine would never be the same and that we should reconsider whether we really wanted to become doctors."

Many of the changes in medicine had already begun by 1946. That year witnessed the first shipment of radioactive substances for biomedical and other scientific research by universities; and the invention of the Univac digital computer. To Dr. Wagner, these two inventions led to the birth of nuclear medicine.

In 1948, Dr. Wagner entered The Johns Hopkins University School of Medicine. After graduating from medical school in 1952, he served his internship at The Johns Hopkins Hospital and progressed to become an assistant resident at the Osler Medical Service at The Johns Hopkins Hospital. In 1957, while working as a clinical associate for the National Institutes of Health, he was selected for a special fellowship at Hammersmith Hospital in the Postgraduate Medical School of London. While in England, he worked in the Endocrine Unit and became interested in studies utilizing radioactive tracers. Dr. Wagner returned to Johns Hopkins and was named Chief Medical Resident for the Osler Medical Service.

Upon completion of his residency, Dr. Wagner joined the Hopkins medical faculty and began working with radioactive isotopes; this led to his appointment as Physician-in-charge of the Nuclear Medicine Division at The Johns Hopkins Hospital in 1964.

Currently, Dr. Wagner is a Professor of Radiology and a Professor of Medicine in The Johns Hopkins School of Medicine; Professor of Environmental Health Sciences in The Johns Hopkins School of Hygiene and Public Health; and Principal Professor on the staff at the Applied Physics Laboratory. He holds honorary degrees from Washington College as well as from universities in Germany and Belgium. Other honors include the first Vikram Surhabel Gold Medal from the Society of Nuclear Medicine of India, the Georg von Hevesy medal, the Hevesy Award from the Society of Nuclear Medicine, as well as numerous honorary fellowships and memberships.

Dr. Wagner's curriculum vitae lists numerous books, chapters and journal articles, and describes hundreds of studies in nuclear medicine. To Dr. Wagner, his most significant work deals with the study of brain chemistry. "Until recently, philosophers, psychiatrists, and psychologists had to rely on soul-searching and introspection to try and fathom the workings of the mind," says Dr. Wagner. "Through nuclear medicine, it is now possible to explore the chemistry of the living brain and its relationship to thinking, behavior, and emotions. If we can learn more about how our brains work, we may be able to change our modes of thinking, allay fears and violence."

Following World War II, recalls Dr. Wagner, many scientists and political leaders hoped that the development of peaceful uses for atomic energy would help eliminate nuclear weapons. Dr. Wagner is optimistic that his research could help curb the cold war mentality. "Physics has given us the power of the atom to destroy," says Dr. Wagner. "The only effective defense against nuclear weapons lies within the human mind. Perhaps, by studying the workings of the mind, biology can help us save ourselves."



Henry N. Wagner MD and his wife, Anne, in China.



# Meet at the Beach



Med Chi's Semiannual Meeting at the  
Carousel Hotel and Resort on the beach at  
118th Street, Ocean City, Maryland 21842

Friday, Saturday, & Sunday,  
September 13, 14, & 15, 1991

**Special Guest Speaker:**  
**Antonia Novello, M. D.**  
**U. S. Surgeon General**

Ocean Front View Guaranteed to all Pre-Registrants





## Which Box Would You Rather Deposit Your Insurance Reimbursements In?

If you process your claims through the mail, it takes an average of two months before your reimbursements make it to the bank.

And that can really put you in a box in terms of cash flow.

But not if you join the more than 1800 physicians who are now using HCS electronic claims systems. On the average, they receive payments in days, instead of months. Reason enough to consider using our custom designed systems.

What's more, our systems are labor savers. Stacks of claims that used to take weeks to process by mail can be sent through our claims

network in a matter of hours. Saving you enormously in administrative time. Not to mention postage.

And since HCS has the backing of a billion dollar health care organization, you can depend on us for long term support, service, and solutions as your office needs change.

Call Toll-Free 1-800-543-6741 for more information. Because in rain, snow, sleet or hail, we can deliver insurance reimbursements faster.



**Health Communication Services, Inc.**

*You'll Be Overwhelmed By Your  
Cash Flow, Not Your Overhead.*

# MRI UPDATE



Figure 1

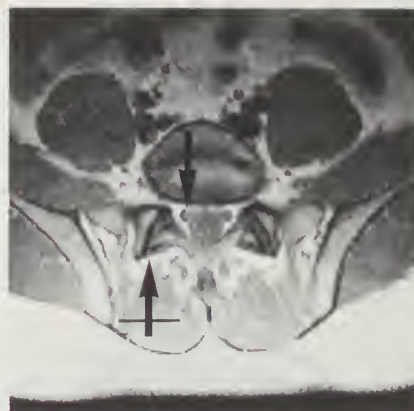


Figure 2

**CLINICAL HISTORY:** This is a 26-year-old male with back pain and right lower extremity radiation.

**FINDINGS:** This is an example of a normal study on a young adult. **COMMENT:** MRI is the screening test of first choice for suspected disorders of the lumbar spine. Notice the clear depiction of the normal L5-S1 disc (figure 1, crossed arrow). The discs of this patient exhibit high signal intensity reflecting normal hydration and none of the discs are narrowed. None of the discs indent the thecal sac which is of intermediate signal intensity and appears as the gray band in the center

of the image. The vertebral bodies are homogeneous and free of destructive lesions. The conus medullaris (arrow) is normal. This sagittal image demonstrates the advantages of MRI over other screening modalities. Routine CT scanning will not display the conus medullaris, lesions of which may masquerade as disc herniation. The general area of coverage is superior with MRI. Disc detail is much better displayed with MRI.

The axial image at L5-S1 (figure 2) exhibits delineation of intraspinal detail far superior to that of CT. The right S1 nerve root is clearly displayed (arrow) surrounded by normal perineural fat

which is the bright high intensity material in the periphery of the spinal canal. State-of-the-art MR images clearly display the bony anatomy of the lumbar spine including the facet joints (crossed arrow). Degenerative diseases and bony neoplasm are routinely detectable.

MRI involves no ionizing radiation and no intrathecal contrast material is needed. It is a patient-friendly outpatient examination well suited for screening purposes.



**Maryland  
Magnetic  
Imaging**

900 Toll House Avenue  
Frederick, MD 21701  
(301) 662-0077

Health Images facilities operate their MRI systems with all available upgrades including contiguous thin slices, high resolution head and body coils, state of the art surface coils, and cardiac gating.

Health Images facilities are a community resource available to all area physicians.



*Health Images, Inc.®*



---

# Stroke in the Young

## Part II

---

Barney J. Stern MD, Steven Kittner MD, MPH, Michael Sloan MD,  
Constance Meyd MD, David Buchholz MD, Daniele Rigamonti MD,  
Robert Woody MD, John Meyerhoff MD, William Bell MD  
and Thomas Price MD

---

Evaluation of the young stroke patient often requires an interdisciplinary approach because of the complexity of the problems encountered. We discuss some of the less common causes of stroke and present an approach to the patient.

*From Sinai Hospital of Baltimore where Dr. Stern is Director of the Division of Neurology; and from The Johns Hopkins Medical Institutions where Dr. Stern is Associate Professor of Neurology, Dr. Buchholz is Associate Professor of Neurology and Director of Ambulatory Services for Clinical Neurosciences, Dr. Meyd is Assistant Professor of Neurology at the Francis Scott Key Medical Center, and Dr. Bell is Professor of Medicine and Radiology; and from the University of Maryland Medical Systems where Dr. Price is Professor of Neurology and Epidemiology and Preventive Medicine, and Director of Stroke Services, Dr. Sloan is Assistant Professor of Neurology and Director of the Neurovascular Laboratory and Neurological Critical Care Unit, Dr. Kittner is Assistant Professor of Neurology and Epidemiology and Preventive Medicine, and a member of the Stroke Center, Dr. Rigamonti is Assistant Professor in the Department of Neurosurgery, Dr. Meyerhoff is Assistant Professor of Medicine in the Division of Rheumatology and Clinical Immunology, and Dr. Woody is the former Director of Pediatric Neurology.*

*Dr. Kittner is supported in part by a Clinical Investigator Development Award (KO8-NS01319-01) from the National Institute of Neurological Disorders and Stroke, Bethesda, MD; by a Grant-in-Aid from the American Heart Association (AHA); and by funds contributed by the AHA Maryland Affiliate, Inc.*

*Reprints: Barney J. Stern MD, Division of Neurology, Sinai Hospital of Baltimore, Belvedere at Greenspring, Baltimore, MD 21215.*

In Part I of this series (June 1991), we explored some of the more common etiologic categories of stroke in young patients. In this article, we discuss conditions that are less commonly complicated by stroke. We also present an overall approach to the young stroke patient. In particular, we emphasize the timing and sequencing of diagnostic tests and how this contributes to optimal patient management.

### Pregnancy

The pregnant woman is subject to any of the causes of stroke in the young.<sup>1</sup> She is, however, also at risk for problems unique to pregnancy, labor and delivery, and the postpartum state. Management of certain conditions such as aneurysmal subarachnoid hemorrhage (SAH) and arteriovenous malformation (AVM) is often complicated by concerns for the health of the fetus. Some conditions unique to pregnancy include peripartum cardiomyopathy, a hypercoagulable state, air emboli, vascular hyperplasia, and eclampsia. Furthermore, a disease can masquerade as stroke and be relatively unique to pregnancy; for instance, metas-

tatic trophoblastic carcinoma can present as an intracerebral hemorrhage.

Diagnosis is aided by relating the time of the stroke to the course of the pregnancy and the postpartum period (Table 1). Management decisions may be influenced by pregnancy. For example, coumadin should be avoided during the first trimester and after the thirty-second to thirty-eighth week of gestation because of its teratogenic and hemorrhagic effects, respectively, and mannitol therapy for increased intracranial pressure may severely dehydrate the fetus.

### Rheumatic Diseases

The frequency of neurologic manifestations varies greatly among the rheumatic diseases; stroke is rarely the major form of involvement.<sup>2,3</sup> When stroke does occur, it is even less likely to be the initial manifestation of the rheumatic disease. Thus, the usual questions regarding the rheumatic diseases when faced with a patient with a stroke are: Is there any underlying rheumatic disease present? And, is this stroke a manifestation of an active rheumatic disease?

For most of the rheumatologic syndromes there is nothing clinically specific about their central nervous system (CNS) involvement which would allow one to make the diagnosis of an immunological illness in the absence of systemic findings. Rheumatoid arthritis,<sup>2,3</sup> systemic lupus erythematosus (SLE),<sup>4</sup> scleroderma,<sup>2,3</sup> Behcet's syndrome, Sjogren's syndrome, polymyositis, cryoglobulinemia, and Henoch-Schonlein purpura have all been reported to cause stroke or stroke-like syndromes.

Serologic studies are not usually very helpful in diagnosing the cause of a stroke. Rheumatoid factor, which will confirm the diagnosis of rheumatoid arthritis in a patient with typical rheumatoid changes, is positive in too many other diseases to be useful in defining other diagnoses. An erythrocyte sedimentation rate (ESR) is recommended as part of the initial evaluation of the

young stroke patient but has limitations because of its lack of specificity. An elevated ESR in a young stroke patient should suggest that there may be an atypical cause, but a specific diagnosis is not provided. Even patients with biopsy-proven vasculitis can have a normal ESR.

Although Lyme disease does not usually cause stroke,<sup>5</sup> its neurologic manifestations (neuroborreliosis) may be mistaken for stroke. There are several case reports of patients with Lyme disease who have a cerebral vasculitis thought to be analogous to the cerebral vasculitis of syphilis. The role of serologic tests in the confirmation of neuroborreliosis is unclear. A negative Lyme antibody assay should rule out the disease in an individual who has non-neurologic systemic symptoms suggestive of Lyme disease. Conversely, a positive titer only indicates previous infection and does not prove active CNS involvement. Some authors feel they can confirm neuroborreliosis by various cerebrospinal fluid (CSF) tests while others disagree.

Sjogren syndrome is a cause of neurologic disease including stroke. The best screening test for Sjogren syndrome is questioning the patient about sicca symptoms followed by an ophthalmologic exam for evidence of dry eyes. If only sicca symptoms are present (without evidence for rheumatoid arthritis, SLE, or scleroderma), a minor salivary gland biopsy to confirm the cause of the sicca symptoms may be helpful. Sarcoidosis is a rare cause of ischemic stroke and can cause dry eyes; demonstrable systemic disease is helpful in making a diagnosis.

The greatest dilemmas occur with SLE. When a young patient with a positive antinuclear antibody (ANA) has a stroke early in the course of typical multisystem disease, it is likely that the stroke is due to SLE.<sup>4</sup> The pathophysiology of stroke in SLE is not clear. Antiphospholipid associated with thrombosis, rather than vasculitis, may be the etiology of stroke in these patients. While valvular lesions in SLE may be more common than previously thought, they do not seem to be a major cause of stroke. When a patient has had SLE for years, does not have active inflammatory disease in other organ systems, and has other risk factors for stroke, it is difficult to be sure that the stroke is due to SLE.

In contrast, when a patient has a stroke and a positive ANA, but no other findings of SLE, one should be hesitant to make a diagnosis of SLE. Estimates of the frequency of a positive ANA range from 0 to 7 percent in healthy people, 17 percent in hospitalized patients, 33 percent in relatives of patients with SLE,<sup>6</sup> and 49 percent in patients with inflammatory nondegenerative rheumatologic conditions. Thus, there are many other explanations for a young stroke patient to have a positive ANA.

SLE rarely presents only neurologically. In these patients, a positive ANA may be the clue that SLE is present. Serologic testing for highly specific anti-native deoxyribonucleic acid

**Table 1. Major Risk Periods for Selected Stroke Syndromes in Pregnancy and the Puerperium**

	Trimester		Labor/Delivery	Postpartum
	2	3		
Intracranial hemorrhage				
Subarachnoid bleeding				
Aneurysm		*	*	*
Arteriovenous malformation	*		*	*
Takayasu's disease			*	
Moya moya disease	*	*		*
Venous thrombosis				*
Cardiogenic embolus				
Peripartum cardiomyopathy		*		*
Nonbacterial thrombotic endocarditis				*
Fat embolus			*	
Trophoblastic disease				*
Eclampsia		*	*	*
Arterial occlusions	*	*		*

Adapted from Goldstein PJ, ed. *Neurologic Disorders of Pregnancy*. Mount Kisco, New York: Futura Publishing Co., Inc. 1986. With permission of the publisher.



(DNA) and Sm antibodies should be performed. Although a positive result from either test will confirm the diagnosis, a negative test does not eliminate the possibility of SLE since the tests are not very sensitive. The presence of thrombocytopenia or cutaneous vasculitis is suggestive of SLE since these findings are associated with neuropsychiatric lupus.<sup>4</sup>

Isolated angiitis of the central nervous system (also known as primary or granulomatous angiitis of the CNS) is, by definition, associated with no systemic symptoms. This disease is suggested in a young patient who presents with severe headache, change in mental status, and focal neurologic deficits.

Even if systemic findings are present, the diagnosis of a particular vasculitis is best made by biopsy of involved vessels, although there may not be a therapeutic need to separate the necrotizing vasculitides (polyarteritis nodosa, Churg-Strauss syndrome, polyangiitis overlap syndrome, and Wegener disease). An exception is Takayasu disease which can be diagnosed on the basis of arteriography. Occasionally, one can identify polyarteritis nodosa radiographically based on the presence of vascular aneurysms.

In most cases, diagnosis of a rheumatic disease as the cause of a stroke suggests that the patient needs treatment with immunosuppressive therapy. Cytotoxic therapy is currently preferred for the necrotizing vasculitides; corticosteroids can be used acutely to suppress inflammation. Corticosteroids are usually the initial therapy for the other inflammatory diseases. The exceptions are Lyme disease which should be treated with antibiotics, and cryoglobulinemia which acutely can be treated with plasmapheresis.

### Cancer and Stroke

Graus et al have extensively reviewed the cerebrovascular complications of cancer and its treatment.<sup>7</sup> There are several major mechanisms leading to stroke in this population: direct effect of the tumor, coagulopathies, and complications of medical interventions.

Tumor emboli, especially from germ cell tumors and intracardiac myxomas, can lead to embolic infarctions and neoplastic aneurysms with intraparenchymal and subarachnoid hemorrhage. Dural metastases are associated with superior sagittal sinus thrombosis and subdural hematoma.

Bleeding into a tumor can result in apoplectic neurologic deterioration and occurs most often with metastasis from germ cell tumors and melanoma. Bleeding also occurs in primary brain tumors including astrocytomas and oligodendrogliomas, meningiomas, and pituitary adenomas.

Acute promyelocytic leukemia is associated with disseminated intravascular coagulation (DIC) and 60 percent of patients die from intracranial hemorrhage. Acute myelogenous and lymphoblastic leukemias cause hemorrhage events because of thrombocytopenia, leukostasis, or CNS parenchymal leukemic nodules.

Nonbacterial thrombotic endocarditis (NBTE) is a

cause of cardiogenic embolism.<sup>8</sup> Adenocarcinomas of the lung and gastrointestinal tract are particularly associated with NBTE. The cause of NBTE is unknown but the association of NBTE with mucin secreting tumors and chronic DIC has raised the question of a hypercoagulable state. Mucin alone can embolize and cause stroke. Chronic DIC has been associated with ischemic and hemorrhagic infarction, as well as a generalized encephalopathy.

Non-metastatic, superior sagittal sinus thrombosis has been associated with lymphoma and breast cancer and can cause hemorrhagic venous infarctions. Other cerebral veins may be thrombosed as part of a paraneoplastic syndrome, probably related to a hypercoagulable state.

Head and neck irradiation damages the microvasculature and, perhaps by affecting the vaso vasorum, can also cause delayed large vessel occlusive disease. Younger patients develop symptomatic vascular disease more rapidly than patients who are older at the time of irradiation; this may be related to the size of the vessel being treated. A *moya moya* pattern can develop after cranial irradiation. Therapeutic options for radiation-associated vasculopathy include antiplatelet and anticoagulant treatment, endarterectomy, and bypass grafts.

L-asparaginase, used to treat acute lymphoblastic leukemia, results in both depletion of proteins required for thrombosis, as well as impaired fibrinolysis. Parenchymal hemorrhage, ischemic arterial infarction,<sup>9</sup> and venous thrombosis with hemorrhagic infarction can occur.

### Stroke and Human Immunodeficiency Virus (HIV) Infection

Clinically, only 0.75 to 1.3 percent of acquired immunodeficiency syndrome (AIDS) patients have a stroke.<sup>10,11</sup> Stroke syndromes can rarely be the presenting feature of AIDS. Clinically evident ischemic infarction has been associated with cardiogenic embolism from nonbacterial thrombotic endocarditis, and the vasculopathy associated with cryptococcal and tuberculous meningitis, lymphoma, and herpes zoster. A cerebral granulomatous angiitis and eosinophilic vasculitis associated with HIV have been described, as has an "aneurysmal dilatation of the arteries of the circle of Willis."<sup>11</sup> The lupus anticoagulant can be found in AIDS patients. Patients can also have transient stroke-like events; this is particularly true for patients with CNS toxoplasmosis.

In a pathologic series of eighty-three AIDS and AIDS-related complex (ARC) cases, twenty-eight patients (34 percent) had evidence of cerebrovascular disease.<sup>12</sup> Ischemic infarction was almost eight times more prevalent than hemorrhagic lesions. Most ischemic infarcts were not clinically evident and involved multiple microscopic sites. Intraparenchymal arterioles had thickened fibrous walls and there was rare perivascular lymphocytic infiltration or vasculitis.



Some two-thirds of cases had calcified intraparenchymal vessels but this finding was not correlated with ischemic infarction. Five patients (6 percent) had intracranial hemorrhages; only two patients had clinical correlates of their CNS bleeding. There was no obvious vascular pathology that could be implicated as a cause of hemorrhage.

HIV-infected patients can develop a particularly aggressive form of meningovascular syphilis with ischemic infarction. Intensive therapy is indicated to treat CNS syphilis.

Hemorrhagic events have been related to thrombocytopenia, ruptured mycotic aneurysm, and bleeding into metastatic Kaposi's sarcoma.

### Pediatric Stroke Disorders

Many causes of ischemic and hemorrhagic stroke share common pathophysiologies in both pediatric and adult patients. There are, however, several causes of stroke which are characteristic of the pediatric age group (Table 2). Since many of these children will survive beyond their teenage years, physicians treating adults need to be aware of stroke syndromes in infants and children.

Homozygous sickle cell disease is a common cause of stroke in children. A variety of small, medium, and large vessel pathologies are present. Penetrating artery

occlusion, intimal proliferation and medial degeneration of medium and large vessels, and *moya moya* syndrome are described. A bimodal distribution is seen with a peak of ischemic infarction in the first decade of life and a peak of SAH in the second and third decades.<sup>13</sup> Cerebral angiography can be safely performed in patients with sickle cell anemia if the proportion of hemoglobin S is less than 20 percent after exchange transfusion. Since sickle cell vasculopathy is a disorder which occurs in a well-defined population and is both potentially preventable and treatable with hypertransfusion therapy, it is of special medical and public health importance.

Vasculopathy rarely occurs in patients with neurofibromatosis. A possibly progressive vasculopathy characterized by intimal hypertrophy and medial degeneration has been observed. Angiographic findings closely resemble those seen in sickle cell vasculopathy. The clinical presentation of neurofibromatosis-associated cerebrovascular disease varies with age: arterial occlusion and a *moya moya* pattern characterize patients in the first decade of life while those who survive into their second and third decades have a higher incidence of multiple aneurysms and *moya moya* syndrome with hemorrhagic events.

Stroke is a common sequela of severe meningitis in children, especially *hemophilus influenzae*, pneumococcal and tuberculous meningitis. Purulent material about the basilar cisterns and orbitofrontal areas of the brain envelops the circle of Willis and smaller arteries and veins leading to thrombus formation.

The anatomic potential for embolic disease to the brain is much higher in children with cardiac anomalies with right to left shunts such as tetralogy of Fallot, transposition of the great vessels, and tricuspid atresia. Complications of cardiac catheterization are relatively uncommon.<sup>14</sup>

Although both small and large vessel ischemic stroke syndromes were commonly reported complications during and after open heart surgery in the 1950s and 1960s, improvements in bypass techniques and filtering systems have reduced stroke in children undergoing these procedures. Microvascular disease presenting as postoperative encephalopathy may still occur. Watershed infarctions can also occur as a result of decreased perfusion during operations in which major vascular anastomoses are performed.

An unusual cause of stroke in children is carotid injury due to blunt intra-aural trauma from a pencil or toy.<sup>15</sup> Actual penetration of the artery rarely occurs and the event may be initially considered trivial. Neurologic symptoms can develop several hours to days later, probably due to intimal damage leading to thrombosis.

Child abuse commonly presents as acute and otherwise unexplained stupor or status epilepticus in the young child. In particular, the whiplash-shake injury syndrome which occurs as the infant or toddler is grabbed by the shoulders and forcibly shaken may cause severe intracranial vascular damage. The common physical findings of preretinal and retinal hemor-

**Table 2. Syndromes and Diseases Presenting with Stroke in the Pediatric Age Group**

Genetic disorders
Sickle cell disease
Thromboembolic disease to medium and large arteries
Intracranial hemorrhage from rupture of <i>moya moya</i> syndrome
Neurofibromatosis cerebrovasculopathy
Osler-Weber-Rendu syndrome
von Hippel-Lindau disease
Tuberous sclerosis
Marfan's syndrome
Intracranial infections
Vasculitic complications of bacterial meningoencephalitis
Sinus thrombosis from facial or otitic infections
Complications of congenital and acquired heart disease
Embolic complications of left ventricular and aortic valvular lesions
Embolic complications of rheumatic heart disease
Embolic complications of infectious endocarditis
Complications of open heart surgery
Trauma
Oral foreign bodies disturbing the pharynx and carotid artery
Arterial and venous lesions from child abuse: whiplash-shake injury; carotid arterial damage from strangulation
Arteriovenous malformations
Vein of Galen syndromes of infancy associated with AVMs
Other AVMs of older infants and children
Fetal and perinatal disorder
<i>In utero</i> fetal ischemic and thrombotic strokes
Periventricular leukomalacia of the preterm infant
Germinal matrix hemorrhage of the preterm (and much less commonly, term) infant
Metabolic disorders
Homocystinuria
Hypoalbuminoproteinemia
Menke's syndrome
Mitochondrial cytopathies: Mitochondrial myopathy, encephalopathy, lactic acidosis and stroke-like episodes (MELAS)



rhages is often a reflection of the severe intracranial shearing forces which have occurred. Arterial thrombosis, subdural hematoma, intraparenchymal hematoma with intraventricular extension, and catastrophic intracranial subintimal arterial dissection can occur.

In pre-adolescents, AVM is a more frequent cause of SAH than aneurysm. The vein of Galen aneurysm is a special kind of AVM which typically presents in infancy with congestive heart failure and hydrocephalus. In older children, SAH or intracerebral hemorrhage can occur.

A variety of rare but well-described vascular syndromes occur on a genetic basis in children. These have been extensively reviewed by Natowicz and Kelley.<sup>16</sup> Homocystinuria occurs from a deficiency of cystathionine beta-synthetase and is associated with arterial and venous thrombotic and thromboembolic disease and a marfanoid habitus. Recent reports have suggested that the heterozygote for homocystinuria may also be at risk for premature cerebrovascular disease, although this is controversial. Familial hypoalphalipoproteinemia, a high-density lipoprotein (HDL) deficiency state, may be associated with premature coronary artery disease and stroke. A spectrum of disorders of organic acid metabolism recently has been found to be associated with stroke-like presentations and pathologies. These disorders include methylmalonic, propionic, isovaleric and glutaric Type 1 acidemias, and Leigh's disease. The mitochondrial encephalomyopathies, especially mitochondrial myopathy, encephalopathy, lactic acidosis, and stroke-like episodes (MELAS syndrome) frequently present with stroke. Osler-Weber-Rendu syndrome (hereditary hemorrhagic telangiectasia), characterized by telangiectasias of the brain, viscera, mucous membranes, and skin, may present with moya moya syndrome and embolic and hemorrhagic strokes. Rarely, tuberous sclerosis and Down's syndrome may be associated with stroke.

Approach to the Patient

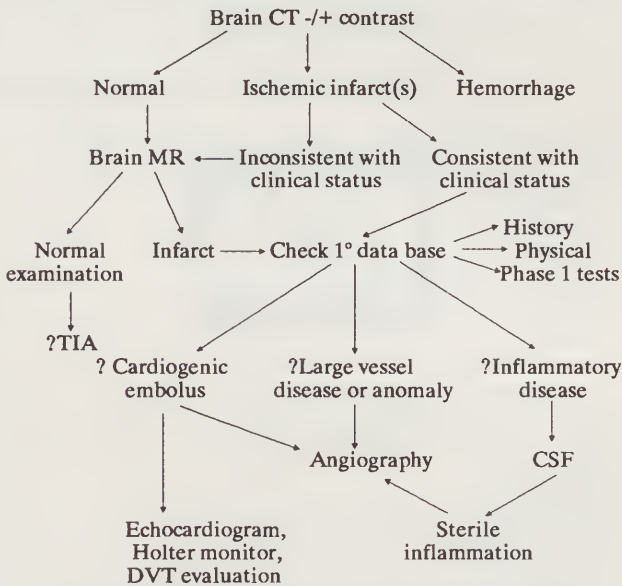
The care of each young stroke patient must be individualized. Age, the severity of the neurologic deficit, and known medical conditions all influence the approach to the patient. Stroke may be the first sign of underlying systemic illness. Given the vast array of diagnostic considerations, a systematic approach to the patient needs to be followed so as not to overlook any etiologic considerations. A thorough patient history and physical examination, as outlined in Tables 1 and 2 of Part I of this series, can provide important information.

Figures 1A and 1B present algorithms with which to approach the patient. The outlines can be modified as necessary for each patient. A brain computed tomography (CT) scan serves as the initial triage point in deciding whether the patient has had an ischemic (Figure 1A) or hemorrhagic (Figure 1B) event. Other diagnoses such as neoplasia or infection can be suggested by CT scan. A brain magnetic resonance imaging

(MRI) scan, because of its exquisite sensitivity, can yield additional information if the CT scan is normal or gives results inconsistent with the clinical picture.

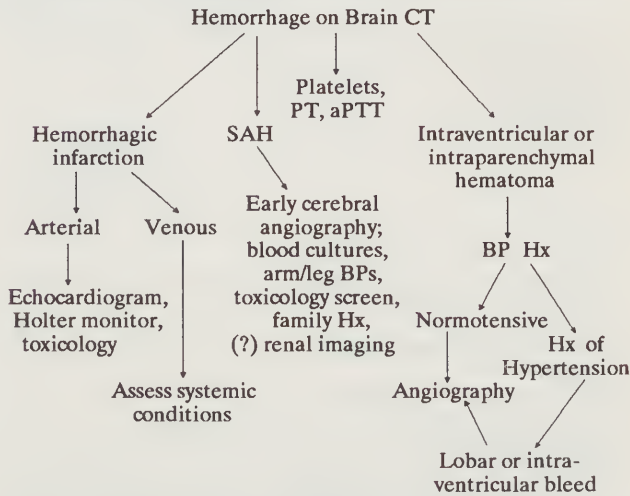
For patients with an ischemic event, the information obtained from CT or MR images should be integrated with the patient's history and examination to make an initial clinical assessment regarding the probability that the stroke is due to a cardiogenic embolus, large vessel disease, a vascular anomaly, or CNS inflammatory disease. Readily available information from the clinical laboratory can provide additional information (Table 3).

Figure 1A. Algorithm: Acute Stroke-like Event



TIA = transient ischemic attack, DVT = deep vein thrombosis, CSF = cerebrospinal fluid, CT = Computed tomography

Figure 1B. Algorithm: Acute Stroke-like Event



PT = prothrombin time, aPTT = activated partial thromboplastin time, Hx = history, BP = blood pressure, CT = Computed tomography

Cerebral angiography is central to the evaluation of many young stroke patients and can be safely performed early in the clinical course.<sup>17</sup> Angiography can document cerebral emboli, although angiograms performed later than forty-eight hours after a stroke may not be as diagnostically helpful because of decreased specificity and sensitivity.<sup>18</sup> Large vessel disease and vascular anomalies are easily visualized with angiography. Since etiologic considerations can often be narrowed down once the vascular anatomy is visualized, unnecessary testing can be avoided. Therefore, early angiography should be considered an integral part of the evaluation of many young stroke patients, unless the presence of a CNS infection or systemic illness closely associated with stroke makes this invasive test

unnecessary. Angiographic dye can cause serious complications when used indiscriminately in some conditions such as homocystinuria and sickle cell disease.

Table 3 compartmentalizes the diagnostic evaluation into phases. Tests in Phase One are readily available and results, in general, can be rapidly obtained to help guide acute management. Phase Two and Three tests are often performed within a day or so of the patient's presentation; if infection is suspected, a lumbar puncture should be done emergently if there is no contraindication.

Phase Four tests should be performed if the diagnosis remains elusive. Results are often not available in a timely fashion; therefore, acute management often needs to proceed independently of a specific diagnosis.

As new causes of stroke are identified, we suspect that the number of tests in Phase Four will grow.

Figure 1B continues the algorithm for hemorrhagic strokes. Here, the initial distinction is among hemorrhagic infarction, subarachnoid hemorrhage, and intraventricular and intraparenchymal hematoma. Obviously, these categories can coexist, but often one process is dominant as judged by clinical presentation and CT scans.

A history of hypertension and the location of a hematoma affect the likelihood of finding an underlying lesion on angiography. Normotensive patients and hypertensive patients with a lobar or intraventricular hemorrhage are most likely to have an aneurysm or AVM demonstrated on angiography.<sup>19</sup>

Critically ill patients need treatment even while diagnostic investigation is underway. Therapy for increased intracranial pressure and systemic disorders should proceed as appropriate. It is hoped that the more rapidly and accurately the cause of a patient's stroke is defined, the more effective overall patient management will be.

Future challenges for the study of young stroke patients include determination of the incidence and prevalence of the various stroke etiologies; further definition of risk factors and pathophysiology; validation of diagnostic and therapeutic protocols, and

**Table 3. Ischemic Infarction Diagnostic Testing**

Laboratory	Neurodiagnostics	Cardiovascular
<b>Phase One</b>		
Complete blood count	CT +/- contrast	Electrocardiogram
Differential		
Erythrocyte sedimentation rate		
Electrolytes		
Glucose		
Blood urea nitrogen, Creatinine		
Liver function tests		
Platelets		
Prothrombin time, Activated partial thromboplastin time		
Blood, Urine toxicology		
Rapid plasma reagin/VDRL		
Sickle prep		
Blood cultures		
Pregnancy test		
Homocysteine assay (nitroprusside test) (for children)		
Cholesterol		
Triglycerides		
HDL-C		
<b>Phase Two</b>		
	Cerebrospinal fluid - include as indicated: cryptococcal antigen cytology, VDRL, IgG index, Oligoclonal bands, <i>B. burgdorferi</i> titer.	Echocardiogram: transthoracic; air contrast; transesophageal.
	MRI	Holter monitor
<b>Phase Three</b>		
	Angiography (Carotid duplex) (Transcranial doppler)	
<b>Phase Four</b>		
Fluorescent titer antibody absorption		Deep vein thrombosis evaluation
HIV assay		
Hemoglobin electrophoresis		
Antinuclear antibody		
Serum protein electrophoresis		
Cryoglobulins		
Lupus anticoagulant (Russell viper venom assay)		
Anticardiolipin		
D-dimer		
Clotting factor assays (antithrombin III, Protein S and C)		
Thrombin time (dysfibrinogenemia)		
Methionine load/serum homocysteine		



acute therapeutic interventions. To rigorously approach these problems requires the efforts of a multidisciplinary team with expertise in neurology, neurosurgery, hematology, cardiology, genetics, and epidemiology.

## References

1. Stern BJ. Cerebrovascular disease and pregnancy. In: Goldstein PJ, ed. Neurological disorders of pregnancy. Mount Kisco, NY: Futura Publishing Co., Inc. 1986.
2. Cohen SB, Hurd ER. Neurological complications of connective tissue and other "collagen-vascular" diseases. *Semin Arth Rheum* 1981; 11:190-212.
3. Sigal LH. The neurologic presentation of vasculitis and rheumatological syndromes. A review. *Medicine* 1987; 66:157-80.
4. Feinglass EJ, Arnett FC, Dorsch CA, Zinzic TM, Stevens MB. Neuropsychiatric manifestations of systemic lupus erythematosus: Diagnosis, clinical spectrum, and relationship to other features of the disease. *Medicine* 1976; 55:323-39.
5. Steere AC. Lyme disease. *N Engl J Med* 1989; 321:586-96.
6. Richardson B, Epstein WV. Utility of the fluorescent antinuclear antibody test in a single patient. *Ann Intern Med* 1981; 95:333-8.
7. Graus F, Rogers LR, Posner JB. Cerebrovascular complications in patients with cancer. *Medicine* 1985; 64: 16-35.
8. Biller J, Challa VR, Toole JF, Howard VJ. Nonbacterial thrombotic endocarditis. A neurologic perspective of clinicopathologic correlations of 99 patients. *Arch Neurol* 1982; 39:95-8.
9. Feinberg WM, Swenson MR. Cerebrovascular complications of L-asparaginase therapy. *Neurology* 1988; 38:127-33.
10. Engstrom JW, Lowenstein DH, Bredesen DE. Cerebral infarctions and transient neurologic deficits associated with acquired immunodeficiency syndrome. *Am J Med* 1989; 86:528-32.
11. Park YD, Belman AL, Kim T-S, Kure K, Llena JF, Lantos G, Bernstein L, Dickson DW. Stroke in pediatric acquired immunodeficiency syndrome. *Ann Neurol* 1990; 28:303-11.
12. Mizusawa H, Hirano A, Llena JF, Shintaku M. Cerebrovascular lesions in acquired immune deficiency syndrome (AIDS). *Acta Neuropathol* 1988; 76:451-7.
13. Powars D, Wilson B, Imbus C, Pegelow C, Allen J. The natural history of stroke in sickle cell disease. *Am J Med* 1978; 65:461-71.
14. Hodson G, Stein SC. Complications of neurodiagnostic studies and invasive procedures. In: Kassner GE, ed. Iatrogenic disorders of the fetus, infant and child. New York: Springer-Verlag. 1986; 61-80.
15. Hengerer AS, DeGroot TR, Rivers RJ, Pettee DS. Internal carotid artery thrombosis following soft palate injuries. A case report and review of 16 cases. *Laryngoscope* 1984; 94:1571-75.
16. Natowicz M, Kelley RI. Mendelian etiologies of stroke. *Ann Neurol* 1987; 22:175-92.
17. Smoker WRK, Biller J, Hingtgen WL, Adams HP, Toffol GJ. Angiography of nonhemorrhagic cerebral infarction in young adults. *Stroke* 1987; 18:708-11.
18. Stillman MJ, Ronthal M, Kleefield J, O'Reilly GV, Wang A, Zamani A, Rumbaugh CL. Cerebral infarction: Shortcomings of angiography in the evaluation of intracranial cerebrovascular disease in 25 cases. *Medicine* 1987; 66:297-308.
19. Toffol GJ, Biller J, Adams HP Jr et al. The predicted value of arteriography in nontraumatic intracerebral hemorrhage. *Stroke* 1986; 17:881-3.

# Vacation time is burglary time.

Home Protection  
only \$195<sup>00</sup>



**Security  
Systems**

Great Value!

When you leave on your summer vacation, there's enough to do,

percent off the original price of \$395). ADT has the largest network of central monitoring stations to help provide for your 24-hour protection. Remember, this offer is good only until Aug. 17, 1991, so call right away, and have a safe trip! Visa, MasterCard and American

about your home and possessions while you're gone. Summer season is high season for criminals too! Before you leave, call ADT and have an ADT® Safewatch Security system purchased by

Aug. 17, for only \$195 (over 50

Express cards accepted.

### Here's what you get

**ADT Safewatch Security Package**  
2 door contacts  
1 electronic motion detector  
1 interior sounder  
Electronic Control Unit with keypad  
Window Stickers  
Central Station Monitoring for only \$19.95 per month.

Valid until Aug. 17, 1991

Call ADT today at (301) 467-9094  
Only \$195<sup>00</sup>

This coupon is valid for a price of \$195 for the installation of a new ADT Safewatch Security system consisting of 2 door contacts, 1 motion detector, 1 interior sounder, and a control unit with keypad, purchased by 8/17/91, with a central monitoring contract at \$19.95 per month. You must present this coupon upon contract signing. Only one coupon per security system. VISA, MasterCard, and American Express Cards accepted. Not valid with any other discount offer. Original coupons only.

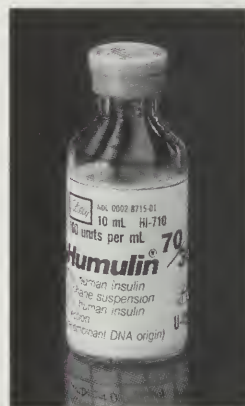


For your insulin-mixing  
or NPH-using patients

## Humulin<sup>®</sup> 70/30 makes life easier

**Rapid onset and sustained  
duration insulin activity  
in a single vial**

- May offer enhanced control through a more physiologic activity profile
- Accurate dosing—eliminates mixing errors
- Convenient premixed dose for better compliance
- Easy to use—for patients who find mixing difficult



**Specify**  
**Humulin<sup>®</sup> 70/30**  
70% human insulin  
isophane suspension  
30% human insulin injection  
(recombinant DNA origin)

**Humulin has  
just the right mix**

Any change of insulin should be made cautiously and only under medical supervision.

Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente<sup>®</sup>, etc), species (beef, pork, beef-pork, human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

*Leadership In Diabetes Care*



**Eli Lilly and Company**  
Indianapolis, Indiana  
46285



---

# Disseminated Histoplasmosis in AIDS Patients in Maryland

---

Michael A. Sauri MD, MPH & TM, Neil L. Julie MD, Herbert M. Juarbe MD,  
Frank J. Mayo MD, Charles H. Ligon MD, Robert L. Fox MD,  
Gregorio Koss MD, Julian T. Coggin MD, Joy W. Burbach MD,  
Joel H. Barton MD and Joseph D. Mashburn MD

---

*From Montgomery County where Dr. Sauri is an Infectious Disease Specialist, Dr. Julie is a Gastroenterologist, Dr. Juarbe is an Endocrinologist, Dr. Mayo is a Pulmonologist, Dr. Ligon is a General Surgeon Emeritus, Dr. Fox is a General Vascular Surgeon, Dr. Koss is a Cardiologist, Dr. Coggin is the Head Pathologist at Montgomery General Hospital, Drs. Burbach and Barton are Clinical Pathologists at Shady Grove Adventist Hospital, and Dr. Mashburn is Director of Laboratories at Shady Grove Adventist Hospital, Washington Adventist Hospital, and Leland Memorial Hospital.*

---

*Disseminated histoplasmosis is increasingly recognized as an opportunistic infection associated with the acquired immunodeficiency syndrome (AIDS). It should be considered in all AIDS patients with perplexing clinical presentations.*

---

**H**istoplasmosis is the most common systemic mycosis in the United States, with an estimated 500,000 new infections per year.<sup>1</sup> Historically, disseminated disease develops in one in 2,000 infected individuals.<sup>1</sup> Sixty-eight patients with acquired immunodeficiency syndrome (AIDS) and disseminated histoplasmosis have been reported in the literature as of August 1988.<sup>2</sup> Disseminated histoplasmosis is increasingly recognized as an opportunistic infection associated with AIDS.<sup>3-7</sup> Recent reports of disseminated histoplasmosis in AIDS patients from the river valleys throughout the United States, the Caribbean, and Central and South America, parallel the reports of AIDS in areas where histoplasmosis is endemic.<sup>2,4</sup> Maryland is at the eastern fringe of histoplasmosis endemicity<sup>7</sup> and cases of pulmonary histoplasmosis have been reported.<sup>8,9</sup>

The following three AIDS patients were diagnosed with disseminated histoplasmosis in Montgomery County hospitals between April 1988 and August 1990.

## Case Number One

A sixty-eight-year-old white female was admitted with a one-day history of fever (104° F.) and recurrent abdominal pain. She had a history of AIDS since a 1987 diagnosis of *Pneumocystis carinii* pneumonia, which had been contracted due to a transfusion following nonsteroidal, anti-inflammatory, drug-induced, upper gastrointestinal bleeding in 1981. The patient had just been hospitalized four months previously with a diagnosis of acute cholecystitis secondary to cholelithiasis treated conservatively with antibiotic therapy alone. Past medical history was remarkable for recurrent intermittent abdominal obstruction and diarrhea during the preceding two years; allergy to Bactrim (trimethoprim and sulfamethoxazole), and gastrointestinal intolerance to azidothymidine (AZT); radiographically stable left lung mass

since June 1988; moderate, chronic anemia; and a canary and a parrot for pets.

On admission, she was cachectic, febrile (101° F.), anicteric, and in moderate distress due to abdominal distention and pain. Significant findings on physical exam were limited to the abdominal exam which revealed normal bowel sounds in a distended, tender, tympanitic abdomen without organomegaly, ascites, guarding, rebound, or rigidity. Initial workup included an acute abdominal series revealing a marked small bowel obstruction.

Preoperative evaluation was remarkable for a white count of  $8.0 \times 10^3$  with seventy-seven neutrophils and a hemoglobin of 10.9; sequential multi-chemistry analysis (SMA-18) was normal except for a sodium level of 120, an albumin level of 2.4, a calcium level of 8.2, and mildly elevated transaminases. She underwent an exploratory laparotomy with removal of a  $2.0 \times 1.1 \times 0.7$  cm mesenteric mass responsible for the obstruction. Pathologic examination revealed granulomatous inflammation with disseminated histoplasmosis associated with extensive and dense serosal adhesions and lymph node involvement. (Figures 1 and 2)

She elected not to pursue further therapy and died four days after discharge.

### Case Number Two

A seventy-one-year-old white male farmer from Howard County was admitted with a three-week history of confusion, progressive weakness, right upper quadrant abdominal pain, fever (104° F.), a fifteen-pound weight loss, and melanotic stool. Past medical history was remarkable for transfusion during a 1984 abdominal aortic aneurysm repair; perforated diverticulum with a subsequent sigmoid colectomy in 1982; numerous hospitalizations for alcohol abuse; arteriosclerotic heart disease with ventricular dysrhythmias after an inferior wall myocardial infarction; septicemia in 1986; a heavy smoking history with emphysema; and degenerative arthritis.

On admission, he was cachectic, pale, anicteric, and in moderate distress due to fever (104° F.) and abdominal pain. Significant findings on physical ex-

amination were limited to the abdominal exam which revealed a distended, tympanitic abdomen with normal bowel sounds. The liver was tender and enlarged (4 cm below right costal margin) with well-healed midline and left lower quadrant incisional scars. Rectal exam confirmed melanotic stool.

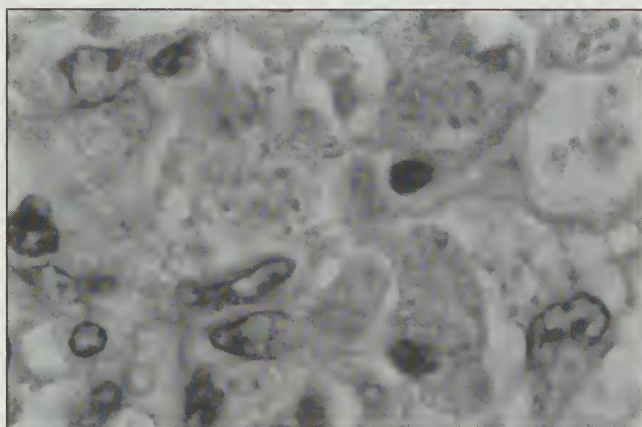
Workup in the hospital revealed nodular pulmonary infiltrates on chest x-ray; enlarged fatty liver; extensive moderate interstitial disease of the lung by computed tomography (CT) scan of the chest and abdomen; cholelithiasis with normal common bile duct by abdominal ultrasound; fatty metamorphosis with non-specific triaditis by liver biopsy; and a low density area in right posterior temporal lobe consistent with brain abscess by CT scan of the head (without contrast). Significant laboratory test findings were moderate anemia hemoglobin (Hgb) (9.4 after two units of packed red blood cells (PRBC)), leukopenia white blood count (WBC) ( $3.8 \times 10^3$  with 52 segments and 34 bands) and thrombocytopenia (76,000), elevated transaminases, and human immunodeficiency virus (HIV) antibody positivity.

He underwent a colonoscopy which revealed a 4 cm ulceration of the ileocecal valve and multiple colonic lesions. Pathologic evaluation revealed granulomatous colitis with intracellular organisms consistent with histoplasmosis in the descending colon, cecum, and ascending colon (Figure 3)

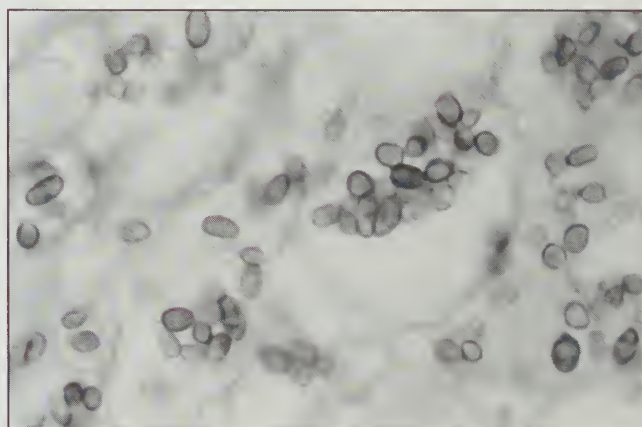
He elected not to pursue further therapy and died sixteen days after admission.

Significant autopsy findings were:

1. Nodular granulomas of lung with focal caseous necrosis; negative for pneumocystis and cytomegalovirus; and positive for intracytoplasmic histoplasmosis (Gomori's methenamine silver (GMS) stain).
2. Recent subendocardial myonecrosis with old myocardial infarction.
3. Micronodular cirrhosis with fatty metamorphosis with scattered small granulomas.
4. Necrotic granulomas containing histoplasma organisms of the colon, spleen, and lymph nodes.
5. Presumed central nervous system (CNS) histoplasmosis (head not examined).



**Figure 1.** Base of small bowel ulcer. Histiocytes with intracellular organisms. 1000x hematoxylin and eosin.



**Figure 2.** Base of small bowel ulcer. Histiocytes with intracellular yeast forms of *Histoplasma capsulatum*. 1000x methenamine silver.



6. Distended gallbladder filled with bile and small stones. No stones in bile ducts.
7. Diverticulosis.
8. Abdominal aorta aneurysm.

The autopsy summary indicated transfusion-related acquired immunodeficiency syndrome with a pure infection of *Histoplasma capsulatum* involving the lungs, liver, spleen, colon, and lymph nodes.

### Case Number Three

A forty-two-year-old white male presented with a six-month history of chronic headaches, seizure disorder, leg paresthesias associated with fever (101 - 105° F.), chills, night sweats, a thirty-six-pound weight loss, mildly elevated liver transaminases, and an elevated sedimentation rate (60). He underwent two extensive but unrevealing neurologic evaluations (including cerebrospinal fluid (CSF) analysis, electroencephalogram (EEG), electromyogram (EMG), and magnetic resonance imaging (MRI) of the head), as well as ear, nose and throat (ENT), dental, and ophthalmologic consultations during the six months prior to admission. The fever of unknown origin (FUO) workup during this period culminated in an admission for a mediastinoscopy to evaluate a change in his chest x-ray within the prior two weeks.

Significant facts in his past medical history were a homosexual lifestyle; idiopathic thrombocytopenia purpura diagnosed eleven months previously, culminating with a curative splenectomy seven months prior to admission; an eleven-month history of HIV positivity with a CD<sub>4</sub> count of 113 (Centers for Disease Control (CDC) Group IIB Symptomatic HIV Infection) on low dose AZT and monthly aerosolized pentamidine since diagnosis; controlled hypertension; a history of gouty arthritis and nephrolithiasis; hyperlipoproteinemia and exogenous obesity; recurrent benign tumors of the rectum, parotid glands, and subcutaneous tissue in the remote past; herpes simplex oralis; and molluscum and contagiosum of the face and chest.

On admission, he was obese and in moderate distress due to fever and dehydration. Significant physical find-

ings were a resting tachycardia (140), fever (103.2° F.), no palpable lymphadenopathy, nonfocal neurological exam except for head twitching and involuntary jerks, and poor cognitive skills.

Pertinent laboratory findings were mildly elevated transaminases, a fasting hypoglycemia, CD<sub>4</sub> of 74 (ratio 0.39), an elevated beta-2-microglobulin, and a markedly elevated P<sub>24</sub> antigen (despite AZT therapy). Extensive serological, parasitic and pan-cultures were unremarkable except for IgG (not IgM) titers for herpes I and II and the absence of detectable titers for *Histoplasma* (both during this admission and at the start of the FUO workup six months previously).

During his hospitalization, the workup showed an elevated left hemidiaphragm compared with a chest x-ray taken two weeks prior, a mildly enlarged periaortic and mediastinal lymphadenopathy by CT scan of the abdomen and chest, and an unremarkable bone marrow aspirate and biopsy, including fungal and acid fast bacillus (AFB) stains.

The patient underwent a mediastinoscopy and lymph node biopsy which revealed granulomatous disease with negative fungal and AFB stains. Pending culture results, he was empirically started on mycobacterium avium-intracellular therapy without improvement. Four weeks after the biopsy, the bone marrow cultures grew out *Histoplasma capsulatum* and, in retrospect, the GMS stain was found to be positive for intracellular organisms with *Histoplasma capsulatum* (Figure 4). He became afebrile within twenty-four hours and all other signs and symptoms resolved within two weeks after the initiation of amphotericin B therapy.

### Clinical Manifestations

In 1985, the CDC revised the case definition of AIDS to include disseminated histoplasmosis in the absence of other immune suppression and with evidence of HIV infection.<sup>10</sup> Most of the cases of disseminated histoplasmosis in patients with AIDS have been reported in persons with an exposure history (i.e., residence or travel in endemic areas such as the Ohio, Mississippi and St. Lawrence River Valleys; living in proximity to

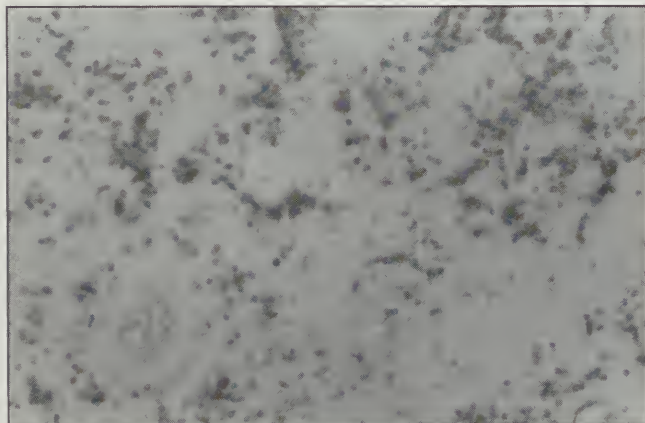


Figure 3. Colon biopsy. High power view of granuloma showing histiocytes with intracellular yeast forms of *Histoplasma capsulatum*. Methenamine silver.

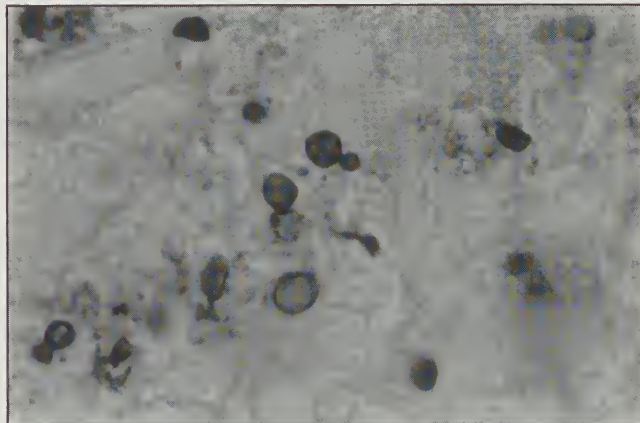


Figure 4. Lymph node with histiocytes and scattered yeast forms of *Histoplasma capsulatum*. 1000x methenamine silver.



recognized roost sites of chickens, birds or bats;<sup>2</sup> or engaged in home renovating, farming, or spelunking).

The clinical presentation in AIDS patients appears to result from reactivation of a latent infection.<sup>4</sup> Unfortunately, the clinical manifestations in AIDS patients are not specific as in acute self-limited illness in immunocompetent hosts,<sup>11</sup> and they usually include chronic fever and weight loss.<sup>3</sup> Pulmonary involvement is common but nonspecific.<sup>5</sup> Chest x-ray findings may be absent, show mediastinal widening or calcified granulomas, or resemble bacterial pneumonia, *Pneumocystis carinii* pneumonia, or tuberculosis.<sup>5</sup> The clinical manifestations are often more severe and unusual in patients with AIDS than in other immunocompromised patients.<sup>5,7</sup> A clinical syndrome resembling gram-negative sepsis has been reported.<sup>6</sup> Thrombocytopenia, chorioretinitis, and meningoencephalitis with brain microabscesses have each been described as initial signs in disseminated histoplasmosis in AIDS patients.<sup>5-7</sup> The predisposition to serious *Salmonella* infections is suspected to be due to the further blockade of the reticuloendothelial system by histoplasmosis,<sup>7</sup> and is similar to what has been observed in patients with bartonellosis and AIDS. Although rare, gastrointestinal disease presenting as a large cecal mass or jejunal bleeding,<sup>12</sup> and cutaneous disease presenting as oral and perianal ulcerations, folliculitis, macular and papular lesions, have been reported.<sup>7</sup>

### Diagnosis

In cases in which the travel history is not fully known or an exposure history is not obtained, the diagnosis of disseminated histoplasmosis may be easily overlooked in the evaluation of AIDS patients with diagnostic dilemmas. Most studies on disseminated histoplasmosis in patients with AIDS identify bone marrow biopsy and culture as the easiest and most reliable means for establishing the diagnosis, especially during an FUO workup.<sup>2,4</sup>

Blood cultures are frequently positive, but require a special lysis centrifugation system not available in most hospitals.<sup>3</sup> Lymph node, lung, and liver biopsies can be diagnostic and may show the presence of non-caseating or caseating granulomas.<sup>5</sup> Wright-Giemsa stain or Gomori's methenamine silver stain reveal the characteristic *Histoplasma capsulatum*-containing histiocytes.<sup>14</sup> *Histoplasma* serologic tests are frequently negative.<sup>3,4,7</sup>

### Therapy

Amphotericin B remains the treatment of choice. However, it is less effective in AIDS patients than in other immunocompromised patients.<sup>7</sup> Relapse has been observed with interrupted courses of amphotericin B. Since a cure is unachievable and the relapse rate is greater than 90 percent in AIDS patients with disseminated histoplasmosis, there is no basis for giving a large initial course of amphotericin B.<sup>7</sup> Limited clinical trials with ketoconazole have demonstrated treatment failures when it has been used as the initial treatment, as well as when it has been used as suppressive therapy following initial treatment with

amphotericin B.<sup>3,7,13</sup> Consequently, a course of amphotericin B (1.0 to 1.5 gms) over six to eight weeks, followed by an indefinite course of suppressive therapy with either amphotericin B (1 mg per kg per week) or ketoconazole (400 mg daily), is a reasonable approach.<sup>7</sup>

### Summary

These patients demonstrate the difficulty in arriving at the diagnosis of disseminated histoplasmosis. The diagnosis in two of the three patients also served as the initial AIDS case-defining opportunistic infection. In each of these patients, the clinical presentations were atypical and in only one patient was a positive exposure history elicited. Recurrent bowel obstruction was the presenting complaint in the first patient and the diagnosis was made only on pathologic exam of the resected small bowel. The second patient's diagnosis was made on biopsy of the colon via colonoscopy. The third patient's diagnosis also eluded an extensive FUO workup; he was diagnosed by bone marrow culture and silver stain of a mediastinal lymph node biopsy, despite serial negative serologic tests for histoplasmosis. The first two patients had significant gastrointestinal disease which is a relatively unusual manifestation for disseminated histoplasmosis. The third patient illustrates the limited diagnostic usefulness of serologic testing in AIDS patients and the continued usefulness of bone marrow analysis in an FUO evaluation.

In conclusion, these case presentations demonstrate that disseminated histoplasmosis in patients with HIV infection can present with unusual manifestations, outside of the typical endemic area, without a positive exposure history or positive serologic test, and may be the initial AIDS case-defining opportunistic infection in these patients. Consequently, a disseminated histoplasmosis should be considered in all AIDS patients with perplexing clinical presentations.

### References

1. Tomita T and Mashiro C. Disseminated histoplasmosis in AIDS: Light and EM observations. *Hum Pathol*, 1988; 19(4):438-40.
2. Johnson PC et al. Progressive disseminated histoplasmosis in patients with AIDS. *Am J Med* 1989; 86:141-2.
3. Johnson PC et al. Progressive disseminated histoplasmosis in patients with AIDS. *Am J Med* 1988; 85:152-8.
4. Mandell W, Goldberg D, Neu H. Histoplasmosis in patients with AIDS. *Am J Med* 1986; 81:974-8.
5. Minamoto G and Armstrong D. Fungal infections in AIDS. *Infect Dis Clin North Am* 1988; (2):447-56.
6. Wheat LJ. Histoplasmosis in AIDS. *Am J Med* 1985; 78:203-10.
7. Wheat LJ. Histoplasmosis. *Infect Dis Clin North Am* 1988; 2(4):841-59.
8. Schoenberger CI et al. Acute pulmonary histoplasmosis outbreak following home renovation. *Md Med J* 1988; (6):457-60.
9. Sorley DL et al. Bat-associated histoplasmosis in Maryland bridge workers. *Am J Med* 1979; 67:623-6.
10. Revision case definition of AIDS. *MMWR* 1985; 34:373-5.
11. Goodwin RA et al. Disseminated histoplasmosis, clinical and pathologic correlation. *Medicine (Baltimore)* 1980; 59:1-33.
12. Haggerty CM et al. Gastrointestinal histoplasmosis in suspected acquired immunodeficiency syndrome. *West J Med* 1985; 143(2):244-46.
13. Gustafson PR, Henson A and Wheat LJ. Ketoconazole therapy for AIDS patients with disseminated histoplasmosis. *Arch Int Med* 1985; 145:2272.



# **Join us in a new kind of partnership ... uniting doctors, lawyers, teachers, parents, and youth against drug and alcohol abuse.**

Become part of the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the

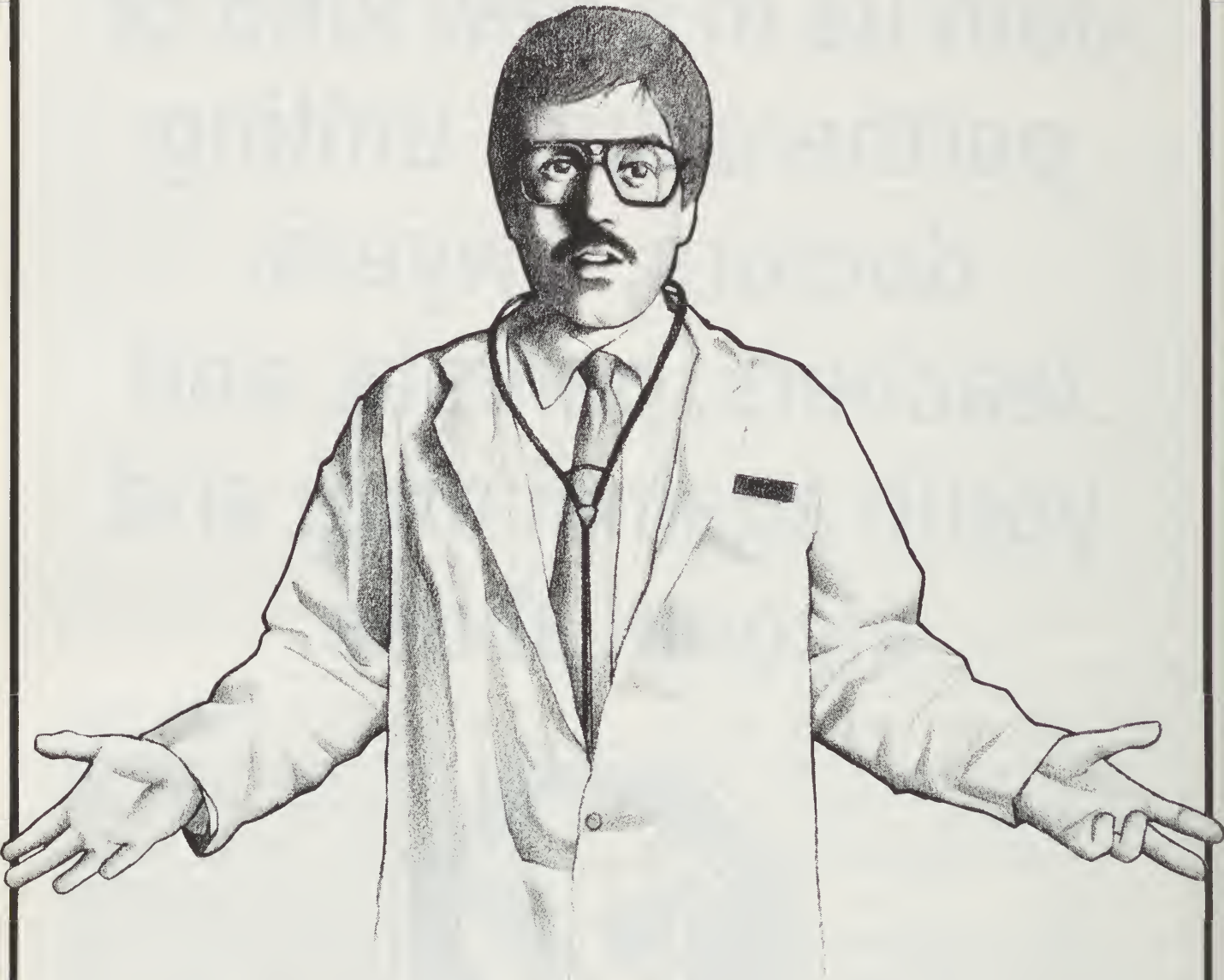


war against drugs. Become part of a unique initiative in Maryland to bring doctor/lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations Department  
at 301-539-0872, 1-800-492-1056.**

Doctor/Lawyer/Teacher Partnership Against Drugs

# HOW ABOUT IT?



Is it fair that only some Maryland physicians support the political activity  
that benefits all physicians?

**JOIN THE CAUSE! GET INVOLVED! GET POLITICAL!**

Join Maryland Medical Political Action Committee

Send your \$100 check to:

Harold Bob, M.D.

Chairman MMPAC

1211 Cathedral Street,

Baltimore, MD 21201

Contributions to AMPAC and State PAC are not deductible as charitable contributions for Federal income tax purposes.



---

# Neurosonology: Its Place in Diagnostic Imaging

---

Michael S. Tenner MD

---

*Dr. Tenner is Professor and Chairman, Department of Radiology, New York Medical College, Valhalla, NY.*

This paper is part of an ongoing series of articles in the *Maryland Medical Journal* honoring the long and illustrious career of John Murray Dennis MD who recently retired as Dean of the School of Medicine at the University of Maryland. Dr. Tenner offers this paper in "gratitude for Dr. Dennis's guidance and teaching in his formative years as a radiology resident under Dr. Dennis's chairmanship."

---

*A large spectrum of pathology of the brain and spine can be imaged by ultrasound quickly, accurately, and relatively inexpensively without moving an infant from the nursery environment.*

---

At a time when advances in magnetic resonance imaging (MRI) and refinements in computed tomography (CT) have provided imaging of the central nervous system with an exquisite representation of anatomy and pathology processes, it may be asked what role does ultrasound provide? Ultrasound, in fact, fills an invaluable niche in the armamentarium of diagnostic modalities, particularly in imaging the brain and spine in the developing fetus and infant, and is an invaluable aid to operative procedures of the brain and spine. The reasons for this are manifold. It is cost effective, particularly in comparison with the other modalities, in terms of capital acquisition and the costs of providing and preparing space. It provides real-time information that permits evaluation of movement and assessment of blood flow in conjunction with color doppler techniques. Because of the portability of ultrasound equipment, it can be brought to the nursery and a study performed without taking the infant out of its critically controlled environment. Since the ultrasound exam can be done without the need for sedation required for CT (and especially MRI studies), it obviates the attending risk of sedation and the need for an anesthesiologist.

Real-time scanning with a sector or linear array transducer yields good anatomic images with improved resolution as higher frequency transducers are used (3.5 to 7.5 mHz range). This is technically possible because of the lack of bone absorption through the cranial vault's natural windows, the fontanelles, as long as these remain open. A quite extensive evaluation of the brain can now be done through these windows using primarily coronal, sagittal, and parasagittal views. At times, information can be garnered in an axial plane using the poorly mineralized and thin temporal squama of the infant. Differences in echogenicity permit identification of numerous intracranial structures. Vascular structures,

in particular, are well seen because of their high degree of echogenicity. This includes the choroid glomus and its extensions in the lateral ventricles, as well as the surfaces and fissures of the brain where major blood vessels course. This is particularly well-appreciated in real-time studies where pulsations are quite evident. There are differences in echogenicity seen in the interior structures of the brain because of the relative degree of acoustic impedance mismatching that occurs. This not only relates to the cellular differences but the orientation of fiber tracts. This is extremely well-demonstrated in the corpus callosum where the degree of echogenicity clearly varies with the change in direction of insonation. Examples of some of the major structures outlined are seen in Figures 1A and 1B.

Many congenital abnormalities are clearly demonstrated. This is particularly true of those in which there are large fluid-filled components. Arachnoidal cysts, Dandy-Walker malformations, and hydrocephalus are clearly seen. Other congenital malformations have rather typical appearances as well. Agenesis of the corpus callosum, (Figures 2A and 2B) holoprosen-

cephaly, and some disorders of migration of cortical structures are examples.

Congenital brain tumors (Figure 3) are rare. Teratomas and craniopharyngiomas are usually found in the midline. Primitive neuroectodermal tumors and gliomas are usually hemispheric, and choroid plexus papillomas or papillary carcinoma are found in the atrium of the lateral ventricle.

Vascular abnormalities such as arteriovenous malformations (AVMs) are echogenic but produce little mass effect. Vein of Galen aneurysms, whether as a result of AV malformations or AV fistulas, are echo-free and can be mistaken for a quadrigeminal plate arachnoidal cyst.

Inflammatory conditions have a spectrum of changes varying from increased echogenicity at the brain surface secondary to perivascular and pial changes, and parenchymal echogenicity in an area of cerebritis, to echolucency of a mature abscess (Figure 4).

The two most common abnormal conditions, germinal matrix hemorrhage and periventricular leukomalacia, are related to prematurity and hypoxia. Germinal matrix hemorrhages (Figures 5A, B, C and



Figure 1A. Normal coronal sonogram at level of atria of lateral ventricles. Highly echogenic structures are the choroid glomera.

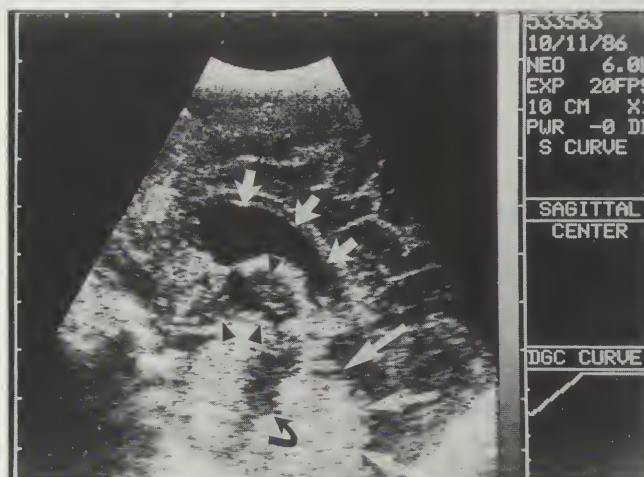
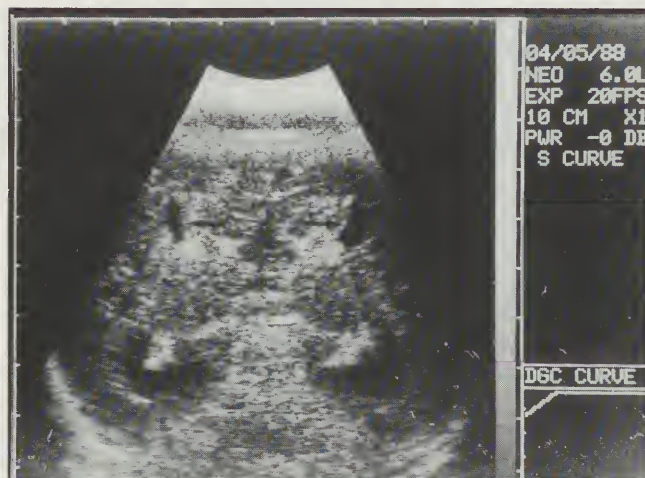


Figure 1B. Normal midline sagittal sonogram. Cavum septum pellucidum and vergae (arrows). Third ventricle (arrowheads). Fourth ventricle (curved arrow). Cerebellar vermis (long arrows).



Figures 2A and 2B. Coronal and sagittal sonograms of agenesis of the corpus callosum. Separation of the bodies of the lateral ventricles (arrows), high-riding third ventricle (curved arrow), and vertical orientation of medial sulci (arrowheads) are characteristic.



D) are classically subependymal in location in the region of the caudate-thalamic juncture and may extend into the brain parenchyma and the adjacent lateral ventricle. The initial hemorrhage is echogenic and then, in time, liquifies peripherally as the central clot

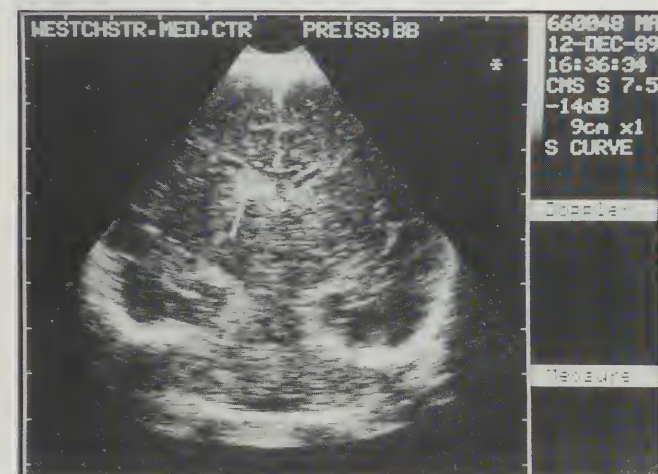
retracts. Continued intraventricular contact of the clot with the cerebrospinal fluid (CSF) may be associated with a persistent communicating hydrocephalus. Prognosis worsens if hydrocephalus persists after the clot resorbs or if parenchymal involvement is present.



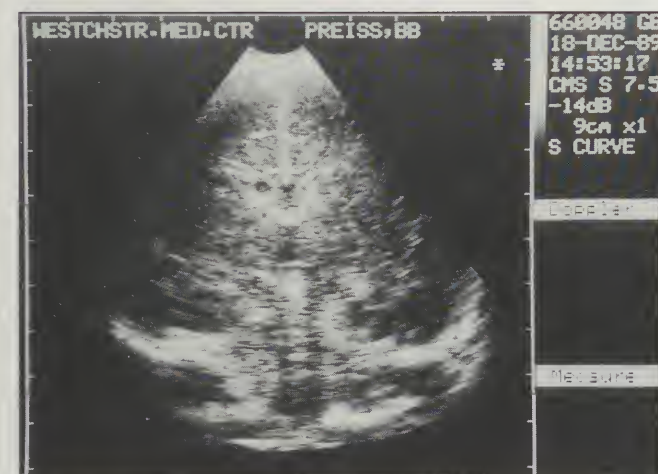
**Figure 3.** Congenital glioblastoma multiforme of the thalamus. The tumor is echogenic posteriorly (arrows) and cystic anteriorly (arrowheads).



**Figure 4.** Streptococcal meningoenkephalitis. Echolucent abscess (arrowheads) with surrounding inflammatory changes (increased echogenicity) is present in the right frontal lobe.



**Figure 5A and 5B.** Coronal and sagittal sonograms of acute germinal matrix hemorrhage (arrows).



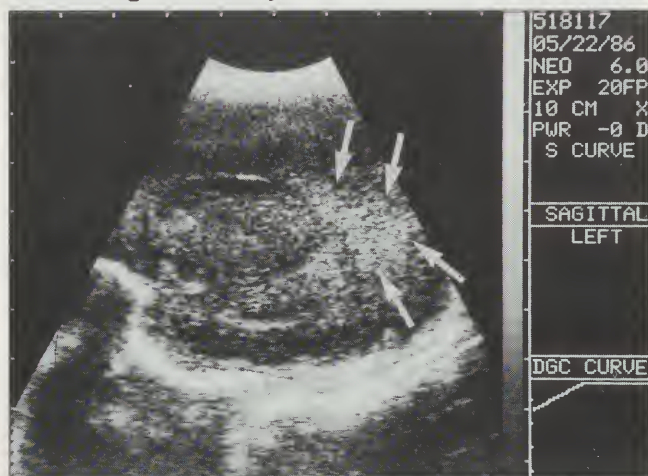
**Figures 5C and 5D.** Liquification of the hemorrhage six days later.



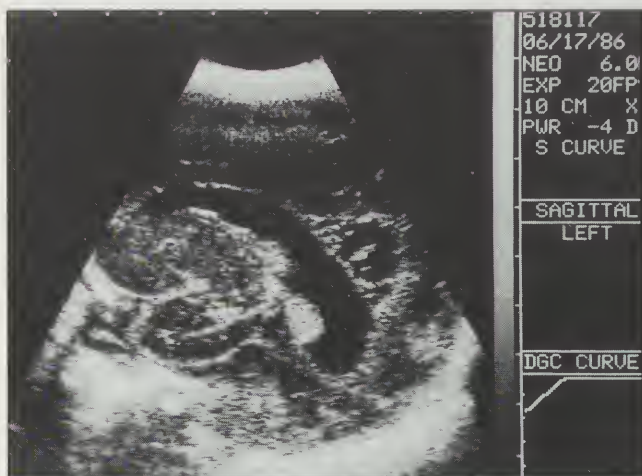
Periventricular leukomalacia (Figures 6A and 6B) is an ischemic or hemorrhagic infarction of white matter usually in periatlial distribution. It is echogenic equal to or greater than the echogenicity of the choroid plexus in both ischemic or hemorrhagic forms. Although ultrasound is less sensitive in detecting this lesion than MRI, it is more sensitive than CT. The cavitation changes that develop are seen as multiple cystic white matter changes unlike the non-septated, uncomplicated porencephalic cysts seen in the late states of parenchymal germinal matrix hemorrhage. Cerebral hemorrhage secondary to trauma has a similar evolu-

tion as germinal matrix hemorrhages with initial echogenicity, followed by clot retraction and liquification. Subdural hematomas are sometimes difficult to image when they are confined to the high convexity regions. This is especially true in infants with small fontanelles which restrict the amount of angling of the transducer that is possible.

In summary, a large spectrum of pathology of the brain and spine can be imaged by ultrasound quickly, accurately, and relatively inexpensively without moving the infant from the nursery environment. ■



**Figure 6A.** Periventricular leukomalacia, acute. There is increased echogenicity in the periatlial area (arrows).



**Figure 6B.** Periventricular leukomalacia, late. Cystic cavitation has occurred in the previous area of acute infarction.

## No paperwork. No hassle. No kidding.

Electronic claims processing reduces your paperwork, verifies your claims in 24 hours and saves you money every time you file a claim. If you use a computer for billing, LifeCard Provider Network can link your system with most major insurance carriers. If you're not currently using a computer, we'll help you get started.

### LifeCard links your office with:

Aetna Life  
Benefit Trust  
Blue Cross & Blue Shield of MD  
Cigna  
Confederation Administration  
Confederation Life  
Equicor  
Great Southern Life

Life of Georgia  
Lincoln National  
Maryland Medical Assistance  
Medicare B  
Metropolitan Life  
Mutual of Omaha  
National Capital BC/BS

Pacific Mutual  
Philadelphia American Life  
Philadelphia Life Insurance  
Principal Mutual  
State Mutual Life  
The New England  
Willse

Join the more than 1200 Maryland providers who already enjoy the benefits of paperless claims handling. Call your LifeCard marketing representative today.

**301-494-4800**

**Provider Assistance and Relations**





---

# When is it Appropriate to Prescribe Hearing Aids for Patients...and When Not?

---

James M. McDonald ScD

---

*Dr. McDonald is Director of Clinical Services, The Hearing Assessment Center, Lutherville, MD.*

---

*There are many factors which enter into the decision about why, where, and when to prescribe hearing aids.*

*The key questions that must be answered to make this determination are outlined here. >*

---

**P**atients with suspected hearing loss should undergo a thorough diagnostic hearing examination by an audiologist to determine the extent and nature of the hearing deficit. The initial question is: Does the patient have active external or middle ear disease?

Diseases requiring medical intervention, such as otitis externa or media, are a clear contraindication for the use of amplification until the disease is resolved or under control.

Once otitis externa and otitis media are treated or ruled out, and there is no evidence of acoustic neuromas, eighth nerve or brainstem lesions, the patient is likely to benefit from hearing aids. This is also true in the case of otosclerosis, when a decision has been made between the patient and physician not to surgically intervene.

The use of hearing aids for patients with otosclerosis is an excellent treatment option. And, it can be combined with other devices, such as loop systems and amplifiers, for additional clarity.

Judgments about hearing loss and appropriate treatments should not be made until the etiology of the loss is determined by a thorough diagnostic examination.

The next question to ask is more lifestyle-oriented than medical: How much does the hearing loss impair the patient? The degree of hearing loss, as well as the degree to which the hearing loss is causing a hearing problem, must be considered when determining candidacy for hearing aids. For example, an attorney who is hearing impaired may have great difficulty in the courtroom -- a problem that is critical to his or her livelihood. On the other hand, a person who is a craftsman with the same degree of impairment may only become frustrated and experience difficulty in group situations where background noise interferes with understanding conversation. This person may not even perceive that he or she has a hearing loss. For this individual, hearing aids may not be necessary. The attorney's situation, however, needs to be addressed; hearing aids may provide the best solution.

Assuming it is appropriate to consider hearing aids, the third question to answer is: Is there hearing loss in one or both ears? The goal is to achieve balanced binaural hearing. If there is loss in

both ears, a prescription for binaural amplification is recommended in order to achieve this goal.

Balance is a vital concern for three reasons:

1. There is strong evidence that a monaural fitting of a patient with a binaural hearing loss results in a deterioration in the hearing of the unaided ear.<sup>1,2</sup>
2. Without balanced hearing, it is difficult, if not impossible, to determine the direction from which a sound is coming. This sound localization is thought to take place in the brainstem and requires a balanced input from each ear. Localization is very important for normal functioning in our daily life.
3. Hearing from only one ear will make it very difficult to understand speech in the presence of background noise. This is often referred to as the cocktail party effect. Being unable to hear speech in the presence of background noise is one of the most common complaints of hearing impaired individuals. Often, more problems are created than solved when there is bilateral sensorineural hearing loss and a hearing aid is used in only one ear.

Prescribing only one hearing aid for a binaural hearing loss has detrimental perceptual effects, as well as deleterious physiological effects in the unaided ear. It is important to explain these clinical issues to the patient. Patients need help in overcoming the psychological aversion to the idea of wearing a *set* of hearing aids.

There are two situations in which aiding only one ear is appropriate; when there is a hearing loss in one ear and when the hearing loss in one ear is so severe that the best correction achievable still will not balance the hearing with the other ear.

Even when amplification is determined to be appropriate, a fourth question to address is: Is the patient motivated to hear better? Often the process of adjusting to hearing aids is difficult, even for the well-motivated patient. If a patient is using hearing aids because of pressure from the spouse, a family member, or a friend, the chance of success is lessened. Often a patient needs time to confront the negative attitudes he or she may have about hearing aids. Caregivers can offer assistance in this acceptance process.

Once the patient accepts treatment by amplification, the final question for the physician is: What professional care should be rendered to ensure successful hearing aid use? Professional prescription and follow-up care have the greatest impact on the likelihood of successful hearing aid use. The majority of hearing aid manufacturers produce a similar product. Their return

policies, warranties, and repair policies are competitive. Of more critical importance is a cooperative working relationship between health care provider and patient.

Physicians often use other specialists in the treatment of patients. An audiologist should be the specialist to whom patients with hearing loss are referred. It is not the job of the audiologist to sell hearing aids. The audiologist will take a history and perform a physical examination of the ear. He or she will then evaluate the patient's hearing. This initial step in the diagnostic examination is done solely for the purpose of identifying the extent and nature of the hearing loss. Then, and only then, can the audiologist make a recommendation as to what form of treatment, if any, is appropriate.

This information will help guide the physician toward appropriate medical or surgical intervention. If medical or surgical intervention is not indicated, then a discussion of the patient's hearing aid candidacy is appropriate. At this point, the audiologist should provide the patient and referring physician with the options for therapy.

The audiologist needs to determine which ears are treatable, if there is a tolerance problem for loudness that would limit the output of the hearing aids, which frequencies need amplification, and how much amplification is needed at each frequency.

Once these questions are answered, and if the patient decides to pursue the use of amplification, then the audiologist may prescribe a set of instruments that can provide the patient with the maximum benefit attainable with the current technology. The audiologist should tailor a rehabilitation program for the patient including regular follow-up visits. These follow-up visits are the mainstay in the identification of problems with current and additional hearing loss, as well as electronic distortion in the hearing aids.

When all of these issues are addressed, and the hearing impaired patient has been referred for care to the appropriate hearing health care provider, the patient is likely to be in the best possible position to be a successful hearing aid wearer. Through the team efforts of the physician, the patient, and the audiologist, the patient will experience a great deal of comfort, freedom from impaired communication, and an enhanced quality of life.

## References

1. Silman S, Gelfand SA, Silverman CA. Effects of monaural versus binaural hearing aids. *J Acoust Soc Am* 1984; 76:1357-62.
2. Gelfand SA, Silman S, Ross, L. Long-term effects of monaural, binaural and no amplification in subjects with bilateral hearing loss. *Scand Audiol* 1987; 16(4):201-7.



# Medical and Chirurgical Faculty of Maryland

# P R E S E N T S

## Canada/New England Cruise

Aboard the Most Spacious Cruise Ship  
in Her Class, The Crystal Harmony

**Deluxe Tour • Fully Escorted • Small Group Size**

**Departing 10/1/91  
Returning 10/11/91**

**\$270.00**

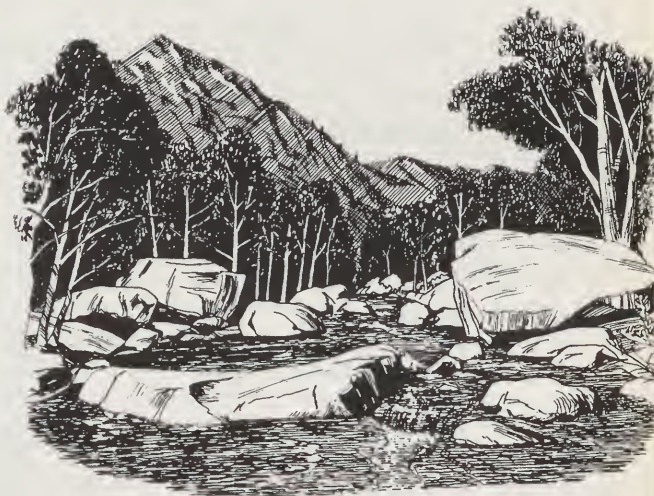
**per person out of  
Baltimore based on  
double occupancy**

**Your Ports of Call  
Include:**

**New York, NY  
Newport, RI  
Boston, MA  
Mar Harbor, ME  
Halifax, Nova Scotia  
Charlottetown, Prince  
Edward Island  
Gulf of Saint Lawrence  
Saguenay River  
Quebec City, Quebec  
Montreal, Quebec**

### *Included Features:*

- A Professional VTS Tour Director for the full duration of your vacation
- All flight reservations and tickets prepared in advance
- Complete travel and tourist information prior to departure
- All transfers and luggage handling between airports and ship (except in customs areas) for those who purchase air transportation
- Complimentary comprehensive travel guide
- Deluxe oversized travel bag
- Convenient passport wallet, name badge and distinctive bag tags
- Five meals each day on board including midnight buffet
- Captain's Welcome Party
- Captain's Farewell Dinner
- Private Vantage Party with beverages and hot and cold hors d'oeuvres
- Entertainment including a nightclub show each night
- Briefings on the highlights of each port of call
- Specially priced optional shore excursions in each port
- Plus much, much more



**Call Vantage Travel TOLL FREE for Departure Dates, Prices & Special Early Bird Discounts at 1-800-322-6677**

Call weekdays 9 AM to 8 PM (EST), Saturday 9 AM to 5 PM (EST). And Sunday 11 AM to 6 PM (EST) OR CLIP AND MAIL THIS COUPON.

**Return to: Vantage Travel Services • Att. Lorrie Wright • 111 Cypress Street • Brookline, MA 02146**

☐ **YES!** I want to know more about the Medical and Chirurgical  
Faculty of Maryland Canada/New England Cruise.  
Please send me my free travel information now.

Name \_\_\_\_\_

Street & Number \_\_\_\_\_ Apt# \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zipcode \_\_\_\_\_

Telephone (\_\_\_\_\_) \_\_\_\_\_

Tell me more about the vacations I've checked below!

- |   |   |
|---|---|
| <input type="checkbox"/> Alaska             | <input type="checkbox"/> Mexican Riviera            |
| <input type="checkbox"/> Amazon Cruise      | <input type="checkbox"/> National Parks             |
| <input type="checkbox"/> American Southwest | <input type="checkbox"/> Hawaiian Cruise            |
| <input type="checkbox"/> Around the World   | <input type="checkbox"/> Polynesian Cruise          |
| <input type="checkbox"/> The British Isles  | <input type="checkbox"/> Russia                     |
| <input type="checkbox"/> Canadian Rockies   | <input type="checkbox"/> Scandinavia                |
| <input type="checkbox"/> Caribbean Cruise   | <input type="checkbox"/> Scandinavia /Russia Cruise |
| <input type="checkbox"/> Exotic Far East    | <input type="checkbox"/> South Pacific              |
| <input type="checkbox"/> Galapagos          | <input type="checkbox"/> South Pacific Cruise       |
| <input type="checkbox"/> Latin Rhythms      | <input type="checkbox"/> Transcanal Cruise          |

9683AD  
22459

ICD-9-CM

RBRVS

RCT

HCFA

BPQA

PPO

IPA

ACEP

# Confused?

DHMH

DRG

HMO

Most people are when it comes to medicine today. Increased communication is the only way physicians can help improve the public's understanding of medicine. In an effort to promote communication, Med Chi is seeking physicians to participate in a SPEAKERS BUREAU.

As a Bureau Speaker, you help strengthen the public image physicians by projecting an accurate representation of the goals and values of all Maryland medical professionals.

To become a member of the Med Chi Speakers Bureau, simply complete the address information, check the appropriate topic(s) listed below, and mail this form to Lori Robinson, Communications, Med Chi, 1211 Cathedral Street, Baltimore, MD 21201.

NAME (Please Print) \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

TELEPHONE (HOME) \_\_\_\_\_ (OFFICE) \_\_\_\_\_

TOPICS \_\_\_\_\_

☐ Abortion  
☐ Abuse/Neglect/Violence  
☐ Adolescent Medicine  
☐ AIDS  
☐ Allergies & Asthma  
☐ Allied Practitioners  
☐ Alternate Delivery Systems  
☐ Alzheimer's Disease  
☐ Anemia  
☐ Angina Pectoris  
☐ Appendicitis  
☐ Arthritis/Rheumatism

☐ Back & Neck Problems  
☐ Baldness  
☐ Birth Control  
☐ Blood & Circulation  
☐ Brain Damage & Recovery  
☐ Burns

☐ Cancer  
☐ Cardiac Risk Factors  
☐ Cataracts  
☐ Child Abuse  
☐ Cholesterol & Diet  
☐ Chronic Pain  
☐ Colds & Flu  
☐ Colitis & Bowel Disorders  
☐ Community Health Issues  
☐ Cystic Fibrosis

☐ Death & Dying  
☐ Dermatology  
☐ Diabetes  
☐ Diet & Nutrition  
☐ Digestive System  
☐ Disabilities/Handicaps  
☐ Doctor/Patient Relations  
☐ Downs Syndrome  
☐ Drug & Alcohol Abuse  
☐ Dyslexia

☐ Eating Disorders  
☐ Emergency Medicine  
☐ Epilepsy  
☐ Ethical Issues In Medicine  
☐ Eye Care & Hearing

☐ Family Life Issues/Parents  
☐ Fertility/Infertility

☐ Food Poisoning  
☐ Fractured & Broken Bones  
☐ Future of Medicine

☐ Gallbladder Trouble  
☐ Gastrointestinal Disorders  
☐ Genetics  
☐ Geriatric Health & Disease  
☐ Glaucoma

☐ Hansens Disease  
☐ Headaches  
☐ Health Insurance  
☐ Heart Disease  
☐ Heat Stroke & Heat Illnesses  
☐ Hemophilia  
☐ Hepatitis  
☐ Hernia  
☐ High Blood Pressure  
☐ Hodgkin's Disease

☐ Holistic Health  
☐ Home Health Care  
☐ Homosexuality  
☐ Hospice  
☐ How to Select a Physician  
☐ Human Sexuality  
☐ Hyperactivity  
☐ Hypnosis  
☐ Hypoglycemia  
☐ Hysterectomy

☐ Immunizations  
☐ Infertility  
☐ Internal Medicine  
☐ Kidney & Urinary Tract

☐ Lasers in Medicine  
☐ Learning Disabilities  
☐ Leukemia  
☐ Low Blood Pressure  
☐ Lung Disease  
☐ Lupus Erythematosus

☐ Mammography  
☐ Medicaid/Medicare  
☐ Men's Health Concerns  
☐ Meningitis  
☐ Menstruation/Menopause  
☐ Mental Health/Illness

☐ Mumps, Measles, Chickenpox  
☐ Multiple Sclerosis

☐ Occupational Medicine  
☐ Orthopedics

☐ Pain  
☐ Parkinsonism  
☐ Plastic Surgery  
☐ Physical Fitness & Recreation  
☐ Physician Fees & Income  
☐ PMS  
☐ Pneumonia  
☐ Prescription Drugs  
☐ Pregnancy, Childbirth & Infancy  
☐ Preventative Medicine  
☐ Professional Liability  
☐ Poison Control in Your Home  
☐ Psychosomatic Illness

☐ Radiation Therapy for Cancer  
☐ Radiology  
☐ Rehabilitation/Physical Therapy  
☐ Reye Syndrome  
☐ Rheumatic Fever

☐ Safety Tips  
☐ Senility & Aging  
☐ Sexually Transmitted Diseases  
☐ Sickle Cell Anemia  
☐ Skin Disorders  
☐ Sleep Disorders  
☐ Smoking  
☐ Socialized Medicine  
☐ Sports Medicine  
☐ Stress Management  
☐ Stroke  
☐ Suicide  
☐ Surgery -- What to Expect

☐ Teen Pregnancy  
☐ Transplants  
☐ Trichinosis & Other Parasites  
☐ Tuberculosis

☐ Weight Loss  
☐ Women's Health Concerns

☐ Other

To Register for the Speakers Bureau by phone, contact Lori Robinson, at  
 (301) 539-0872 or in Maryland at 1-800-492-1056.



# Amos A. Evans MD: Father of American Naval Medicine

Seruch T. Kimble MD, FACP

*Dr. Kimble is an internist in Silver Spring, MD.*

---

*Dr. Evans was the first to be appointed Surgeon of the Fleet, after having served with distinction on the frigate USS Constitution (Old Ironsides) during the War of 1812.*

---

Amos Alexander Evans MD, a Marylander and surgeon on "Old Ironsides," has been called the Father of the Naval Medical Corps.<sup>1</sup> He was the first to be appointed Surgeon of the Fleet, after having served with distinction on the frigate USS Constitution during the War of 1812. His medical and surgical skill, devotion to duty, and meticulous recordkeeping set the standard for those who followed.

Amos was born four miles north of Elkton in Cecil County, Maryland, on November 26, 1785. His father, John Evans, owned a foundry which manufactured bar iron, nails, hinges, and other articles. His father also rolled copper, and he and Paul Revere provided most of the sheathing and other copper items for the early American navy. The Evans homestead still stands on the banks of the Big Elk Creek and has been beautifully preserved (Figure 1).

Young Amos received his early education at the Newark Academy in Delaware. He studied medicine from 1804 to 1806 under Dr. George E. Mitchell, a general practitioner in Elkton. In 1806 and 1807, Evans attended lectures by Dr. Benjamin Rush and Dr. Physick in Philadelphia. Three volumes of his notes on lectures by Dr. Rush are in the possession of the USS Constitution Museum in the Charlestown Navy Yard, Boston, MA. The Museum also has single volumes of his classroom notes on courses given by Dr. Physick of Philadelphia and Dr. Jackson of Boston.

Benjamin Rush MD, a signer of the Declaration of Independence, was the most influential physician of his day. Several factors accounted for this, among them is the fact that 400 of the 600 medical students in our young country at the time were trained in Philadelphia. Rush was a teacher, clinician, author, and politician. He had strong likes and dislikes. Chief among the latter were disease, the British, and Dr. Shippen. His therapeutics were in the British tradition. It was thought that illness was caused by toxins which could be removed by bleeding, purging, vomiting, or blistering. By today's enlightened standards, such therapeutic measures for disease and trauma are illogical and harmful. However, such was the dogma of the days of Benjamin Rush MD and his students. This is clearly reflected in the personal journal and the two prescription books kept by Dr. Amos A. Evans while he was on the USS Constitution.



Figure 1. Evans homestead on the banks of Elk Creek, north of Elkton, MD

A reprint of the journal is preserved in the rare book section of the Library of Congress in Washington DC. The prescription book covering March 26, 1812 through August 27, 1812 is in the possession of the Clements Library of the University of Michigan at Ann Arbor,<sup>2</sup> as is Evans' "Reefer's Log" and the medical records he kept while stationed at the Charlestown Navy Yard in Massachusetts. The prescription book from his August 28, 1812 through March 5, 1813 period on the USS Constitution is at the Historical Library, Yale University School of Medicine, New Haven, CT.<sup>3</sup> Several letters which he wrote to his parents during extensive travels have been preserved. They reveal a well-educated, patriotic young physician with a multitude of interests. He recorded his professional and social observations in meticulous detail.

His Navy career started in September 1808 when he was appointed surgeon's mate USN. In 1810, he became surgeon, and during 1812 to 1813 served on the USS Constitution. In 1814, while on shore duty, Evans studied at Harvard University and received his medical degree with distinction. The following year, he was assigned to the USS Independence. Commodore Bainbridge appointed the young Dr. Evans, now age 29, Surgeon of the Fleet; he was the first to hold that rank in our young Navy's history. In July 1815, the USS Independence sailed to the Mediterranean on orders of President Madison to quell the Barbary pirates. The journal kept during this tour of duty is in the manuscript division of the New York Public Library.

In 1817, Amos Evans MD returned to Elkton, MD and engaged in private general practice. It would have been difficult to raise a family on fifty dollars a month, the prevailing wage for a naval surgeon. Resignation from the Navy came in 1824.

His first naval assignment was to the Marine Hospital in New Orleans, Louisiana. The Clements Library of the University of Michigan has two letters he wrote to his parents from New Orleans in 1809. His letter of

February 13, 1809 described the city, the hospital, and the large variety of commercial shipping on the Mississippi. After analyzing the shortcomings of the carts and wagons of the city, and the malnourished state of the beasts that pulled them, Evans speculated upon the rumored impending attack by the Spanish. He considered several battle scenarios. In a letter dated June 15, 1809, he fluently expressed his patriotic fervor and anti-British bias:

I confess I am somewhat of Duane's opinion relative to the settlement of our differences with Great Britain. Nor do I believe that the adjustment is honourable to us. We have abandoned the main question and tacitly acknowledged the right of search and impressment. Have they given up the right of search? No. Have they punished Barclay? No. What ever they may say to the contrary, he was absolutely promoted to a higher command! Have they returned the seamen taken from the Chesapeake? No. That is impossible for some of them were hung. Have they in short given us anything else other than a few vague promises? No, no. 'Tis all talk and no cider...

Dr. Evans was ordered to St. Mary's, Georgia in 1812. While en route, he was shipwrecked along the North Carolina coast. He travelled by land to Washington DC. The Navy Department assigned him to the frigate USS Constitution which was lying in the Potomac. Maintenance and repairs were being performed, as well as the resheathing of her bottom with copper. His prescription book started March 26, 1812.

### The USS Constitution

Many of us gave our pennies to save her when we were in grade school. The campaign was successful, thanks to the monetary contributions, the skill of the engineers and artisans who did the work, and the live oak timbers which held her together when the rotted parts were replaced. She floats proudly in the Charlestown Navy Yard (Figure 2). A total of 700,000 tourists visit her each year. They see the sick bay (Figure 3), the surgeon's quarters (Figure 4), and the room in which amputations were performed. The latter had its floor painted red so the blood would not alarm the crew. After the guided tour, visitors have a heightened awareness of the hardships of early naval life and the valor of its men. The nearby USS Constitution Museum contains many artifacts and displays. Guests are shown a slide presentation based on Dr. Evans' activities aboard the vessel, focusing on the battle with the Java. Visitors are also shown shipbuilding techniques of the period, and portraits and biographical sketches of many of the commanding officers. Unfortunately, no portrait of Dr. Evans is extant.

The US Navy, such as it was, was disbanded in 1785 and the individual state's navies sold off.<sup>4</sup> Our merchantmen were plundered and their crews seized by both England and France, so George Washington signed a bill in 1794 to create a permanent navy. Work was immediately started on six frigates, including the Constitution, the Constellation, and the United States. All three were launched in 1797 in Boston, Baltimore, and Philadelphia, respectively. They were used in the





Figure 2. USS Constitution, Charlestown Navy Yard, Boston, MA.



Figure 3. Sick bay showing officers beds. In the event of death, the bed was weighted with cannon balls, a lid affixed, and the flag-draped coffin committed to the deep. Non-officers were buried in their hammocks.

war with France (1798) and the Barbary wars (1803 to 1806). By 1812, the Navy had seven large frigates, and nine schooners and brigs. Their crews were experienced and skilled. The USS Constitution is a three-masted fifty-six-gun frigate which carried a crew of 456 men. She carried one surgeon, one or two surgeon's mates, and a loblolly boy. The loblolly boy was a petty officer whose chores included shaving, feeding, and bathing the ill and injured. He compounded the



Figure 4. Surgeon's quarters. Berth railing in foreground.

prescriptions and rang the ship's bell to announce sick call. He wore no specific uniform. In some instances, he kept the journal (prescription book), but comparison of the prescription books with Dr. Evans' personal letters indicates that Evans did the overwhelming majority of the writing. The surgeon had to function as psychiatrist, urologist, ophthalmologist, internist, dermatologist, orthopedist, and general surgeon. His tools were his eyes, ears, nose, and fingertips. The stethoscope, thermometer, and sphygmomanometer had not yet been invented. Bacteria and viruses were unknown. Treatment was symptomatic.

### Medical Problems

Dr. Evans' case load was heavily weighted with venereal disease, injuries, and dysentery. Functional disorders, scurvy, arthritides, ear, nose and throat (ENT) infections, seizures, and drunkenness were also encountered.

Syphilis was treated with mercuric chloride ointment rubbed on the thighs twice a day. Cataplasms (poultices) were applied to buboes. Bread, lead acetate, and subacetate poultices were applied to chancres. None of this was curative of course, and sailors played a large role in spreading syphilis throughout the world.

Gonorrhea afflicted about five percent of the Constitution's crew. Evans applied lead acetate solution, suspended the testicles, and administered sodium sulfate and flaxseed tea as laxatives. He used the term "chordee" to describe painful penile erection, often with a downward bowing, caused by gonorrhea. The term is derived from the French expression, *chaude pisse cordee*.

Diarrhea was treated in a standardized fashion and the stools were not described. Ipecac, Dover's pills (ipecac and opium), rice, tapioca, flaxseed tea injections, and sago palm pudding were frequent remedies. Injuries occurred often, even in the absence of hostilities. Sailors fell from the rigging. They were occasionally injured while being punished. Severe cases were sent to a hospital when the ship was in port. An illustrative case is that of Prescott.<sup>5</sup>



*Prescott.* May 30. Cut his head some days ago by diving against something in the bottom of the river (Potomac). On examination by dilating the wound I find that the pericranium has been laid bare and that some small spicules of bone had exfoliated and were in the wound keeping up a thin discharge. Extracted them and introduced bits of lint into the wound to keep it open. Cont. dressing with Laudanum. No fracture or depression of any kind could be discovered, nor any symptoms whatever of either concussion or compression.

May 31. Discharge from wound is thick and healthy. Apply pledget of lint to absorb the pus.

June 1. Wound in scalp looks well. No pain or fever.

June 2. Head looks better.

June 3. Head better

June 4. Tongue slightly furred. Not much appetite. Rx Sulph. soda oz i. Dress head as usual. No pain.

June 5. Head better. Dress as before.

June 6. Continue dressing.

June 7. Returns to duty.

Another fascinating case is that of a sailor with the prophetic name of Fails.

*Fails.* April 29. Had been out of the yard some days drinking. Was called to him yesterday morning and told that he had taken opium. Found him lethargic and stupid. Could not rouse him by any exertion. Pulse was rather increased. Tried to produce vomiting with a feather but did not succeed. Gave him granatum about 15 gra. Ant. Tart. Potass. before a discharge was produced. His stomach was well cleansed but the stupefaction remained until near night. His skin became cold and pulse much weak. Gave him wine and water. Found his tongue furred and dry in the evening. Gave Laud. Vin: ant. spt. n Dulc. Continue wine and water. At 10 o'clock complaining of pain in his stomach. Hicough. Pulse feeble. Applied Emplastrum Epispart. (vesicant) to region of stomach which did not remain on a sufficient time to draw. Produced a discharge from the bowels by an injection. His tongue is furred and dark this morning. Pulse quick. Skin cool. His stomach will retain nothing. Apply Emplastrum Epispart. to region of stomach.

April 30. Continued to vomit through the day. Pulse more tense and face flushed. Took some blood. Gave saline effervescent draughts am hora. Gave enem. Face flush this morning. Tongue very foul and yellow. Pulse quick and somewhat tense. Blister drew well. Vomited this morning. Had a stool this morning. Complains of weakness and uneasy sensation at stomach. Was somewhat delirious yesterday. V.S. enema; saline draughts.

May 1. Continued to vomit through the forenoon. Gave Laud. liq. gtt. x in his effervescing draught. Gave essence peppermint in each dose in the evening. Took about oz vi of blood at noon. Bowels open. Had some rest last night. Was now and then delirious. Much better this morning. Tongue not so foul. Drank some coffee and thin sago. Pulse still quick. Some soreness about stomach. Cont. mixt. effervescent am 3 hora. Sago, etc.

May 2. Rested well last night. Took Super. Tart. Potass. yesterday. Bowels open. Pulse quick. Tongue slightly furred. No pain. Some appetite. Sago. Tapioca or rice. A little wine.

May 3. Took some bark and wine yesterday evening. No stool since yesterday. Pulse quick. Some appetite. No pain. Rx Dect. cinch. Wine. Had cramp in stomach he says last night. Rx Essence peppermint occasionally. Injection. Nourishing and light diet.

May 4. Much better. Cont. Dect. cinch. Wine. Nourishing diet.

May 5. Better. Cont. Dect. cinch cum elixir vit. Wine.

May 6. Much better. Cont. Dect. cinch. Wine.

May 7. Better. Cont. as before.

May 8. Returned to duty.

May 19. Has been out for some days. Came back yesterday

evening quite delirious. Pulse quick and weak. Tongue furred. Complains of being weak and vertigo. Says he has eaten nothing and has lain out in the rain. Rx effervescing draught eum Laud. Liquid gtt. x in each dose am 2 hora. Vomits frequently. Wine.

May 20. Much better. Quite rational. Wine. Dect. cinch.

July 10. Has had dysenteric affection for some days. Says he voids blood. Tongue furred and streaked with yellow. Pulse frequent and feeble. Rx Pulv. ipecac gr. xv L.D.

July 11. Med. operated yesterday. Had a griping and took Pulv. Doviri gr x (ipecac and opium). Was attacked this morning with a distressing vomiting. Pulse quick and feeble. Rx effervescing mixture am hora eum Laudanum Liquid gtt. x and effervescing peppermint gtt. x in each dose. Toasted water for common drink.

July 12. Was intoxicated yesterday and has been vomiting all night. Gave enema of flaxseed tea with Laud. Rept. mist. effervesc. every 2nd hour. Dress blister.

July 13. Pulse very feeble. Tongue furred; dark. Lax troublesome. Vomiting checked. Rx pill ex opii and ipecac and col. tir die. Wine.

July 14. Fell out of his hammock yesterday and cut his eyebrow. Retained the edges with adhesive plaster. His pulse was feeble. Gave wine and pills as directed yesterday.

July 15. Pulse very feeble. Great debility. Rx pills ex opii et ipecac and submur. no. iii. Wine.

July 16. Pulse feeble and frequent. Bowels very loose. Skin feverish. Feels much debilitated and is impressed with a belief that he will not recover. Rx opii gr ss, Submur. gr ss. Ipecac gr. i. Sum in am tertia hora. Drink wine and water. Arrow root.

July 19. Is extremely feeble. Scarcely any pulse. Low muttering delirium. Ordered pill ext. camph gr i cal and opii gr ss am hora. Madeira wine every 20 min.

July 20. Cont'd to sink gradually until the afternoon when he expired about 5 o'clock.

## Battle Action

The Constitution put to sea just after the war with England had been declared. Dr. Evans' first notation in his personal journal reads, "June 11th, 1812 - left the Navy Yard at Washington City in the US frigate Constitution."<sup>6</sup> A few days later, she was becalmed off the New Jersey coast while confronted by three British frigates and two smaller ships. The chase lasted three days and escape was effected by the ship's cutter hauling the kedge anchors ahead and then having the crew man the capstan to haul the ship ahead. Evans wrote in his journal:

July 19 - thus terminated a disagreeable chase of nearly 3 days, - attended with inexpressible anxiety and alternate elevation and depression of spirits as the winds were propitious or otherwise. We had many times given over all expectations of making our escape, and had it not been for uncommon exertion we must inevitably have fallen a prey to the superiority of our enemy.

On August 14, while at sea again, one of the surgeon's mates left a candle burning in his stateroom. A fire ensued and Dr. Evans injured his right hand with a crowbar while forcing open the locked stateroom door. The fire was extinguished. He was obliged to write with his left hand and was afraid that he might develop tetanus. He added, "The cry of 'fire' is dreadful on shore, but ten thousand times more distressing on board a powder ship at sea."

On August 19, 1812, the Constitution battled the Guerriere. Evans described the action as follows:



August 19th, Wednesday. - Cloudy and foggy. Course S. & W. Wind N. by E. Lat. observed 41° 42' N. Long. by D. R. 55° W. At 2 p.m. discovered a large sail to leeward. Made sail and stood down for her. At 4 discovered her to be a large Frigate. When we were within about 2 or 2 1/2 miles she hoisted English colours and fired a gun. We stood towards her with reefed topsails without showing our colours. She then commenced firing, and gave us several broadsides without much effect before we commenced firing. She kept wearing several times with a view probably of trying to get the weather gauge of us, which we avoided by wearing also. We hoisted our colours and fired the first gun about 15 minutes past 5 o'clock p.m., but did not come into close action until about 6 o'clock, and after 25 minutes from the time we were closely engaged she struck, having previously lost all three of her masts and bowsprit. Her hull was much injured. Several of her guns were dismounted or otherwise rendered useless on the gun deck by our shot. She had 15 men killed and 62 wounded, most of them very dangerously, immense mischief and destruction having been done by our grape & canister shot.

**Killed:** Wm S. Bush, 1st Lt. Marines; and Seamen, Jacob Sago, John Brown, Caleb Smith, James Ashford, Robert Brice, James Reed.

**Wounded:** Charles Morris, 1st Lieutenant, Dangerously; J.C. Aylwin, Master, slightly; Richd Dunn, Seaman, Dangerously; Danl Lewis, do.do; Taylor, do. Slightly; Mullen, Marine, do.; Geo. Reynolds, Seaman, do. Beside 4 or 5 others so slightly as not to be disabled from coming to Quarters.

During the engagement she came against our stern with her bows twice, and carried away her jib boom and injured our Taffrail. It was when in that situation that Lt. Morris and Lt. Bush were shot. Mr. Morris first jumped on the Taffrail with an intention of boarding her and was instantly wounded in the parietes of the abdomen. Mr. Bush jumped into his place the instant he fell and immediately one musket shot entered his face and passed into his brain. Little or no other injury was done us at that time, and her quarter deck and fore-castle were completely swept. Her Second Lieutenant was killed, and the Captain, 1st Lieutenant, Sailing master, and one of the Master's mates wounded. She hoisted 3 or 4 flags at the commencement of the action, and struck immediately after she got clear of our stern. Her foremast and mainmast and mizzenmast fell about the time she was in contact with us. After she struck the Capt. Is. Rd Dacres Esq came on board and informed us that it was His Britannick Majesty's ship La Guerriere. We sent Lt. Reed on board and finding the ship in a situation that was considered dangerous to attempt getting in we were employed all night getting the men and crew from on board. She mounted 49 guns and had about from 260 to 300 men having sent previously part of her crew in prizes. Capt. Dacres is a pleasant, agreeable young man, 24 years of age. Our crew behaved very nobly. They fought like heroes, and gave three cheers when the colours were hoisted. They also cheered when each of her masts went over the side, and when her colours were struck. Whilst she was on our stern one of her forward guns was run nearly into our cabin window and fired, but did (fortunately) little or no execution. A shot that entered our after port on the starboard side of the gun deck killed 2 men at the after gun and wounded one. From the firing of the first gun to the close of the action was one hour and ten minutes. The Guerriere had 15 killed and 62 wounded.

During the battle she earned her nickname -- Old Ironsides. One of her gunners saw a British shot bounce off her oak planking and shouted, "Her sides are made of iron." Dr. Evans described the wounds of the seven injured seamen in great detail. He wrote daily progress notes and documented the results of therapy. He performed one leg amputation. In those days, stumps invariably became infected, despite cauteriza-

tion with tar. All seven patients recovered. Evans was a fine anatomist and performed autopsies when possible to confirm his diagnostic impressions. He also, on occasion, dissected amputated limbs to ascertain precisely the nature of the injury.

On September 15, 1812, Captain Hull resigned his command to Captain Bainbridge. In October, they took to sea from Boston and headed to South America.

Off the coast of Brazil, the Constitution met the Java on December 29, 1812. The action was brief. The British had forty-eight killed and 102 wounded. We lost nine, with twenty-two wounded. Seven of the wounded eventually died, including three of the four with leg fractures. Presumably, all of these had amputations. Evans vividly described the action as follows:<sup>7</sup>

December 29, Tuesday. - At 8 a.m. discovered two ships to windward of us. At 9 one of them stood along shore, the other towards us. At 10-30 min. within 8 or 9 miles coming up with us. At 11:30 the Comm'd. supposed the strange sail to be a two decker and made sail away from her; made the private signal of the day which was not answered. The strange sail hoisted a tricoloured signal flag at her main topgallantmast head & kept it flying a long time. At 12 the sail gaining on us going 10 k. Lat. ob: 13° 6'S. Long. by chron. 37° 38'W. Hoisted our ensign & pendant. The strange ship then hoisted an English ensign at the peak. At 1:25 the strange sail gaining on us discovered her to be a Frigate. At 1:37 took in part of the sail and stood for the enemy, having previously had all clear for action. At 1:45 she bore down intending to rake us which we avoided by wearing. At 4 minutes before 2 p.m. we fired a broadside at her, when she bore up and returned it: she was at that time distant about 1 mile. She was standing bows on but had hauled down her peak with an intention of wearing, when an order was given to the 3rd Division to fire one gun in order to make her hoist her colours - but the whole broadside was fired without stopping. The action then commenced warmly on both sides. At 3:15 her maintopmast and foremast went over the side. At 4 her mizzenmast went about 10 or 15 feet from the deck. At this time her fire was stopped and we hauled aboard our fore and main tack and stood from her to repair our braces, etc. At 4:25 her mainmast went nearly by the board. The colours still flying at the stump of the mizzen mast. At 4:50 wore and stood for the Enemy. At 5:25 got ahead of her in a raking position and were about giving the order to fire when she struck her colours, at which our crew gave 3 hearty cheers, as they had done when we first beat to quarters & several times during the action. At 6 sent the cutter with Lieut. Parker on board, which returned with the 1st Lieut. Chadds (the Capt. being mortally wounded) who delivered his sword, together with His Majesty's Ship Java - rated 38 but mounting 47 guns - Henry Lambert Esq. Capt. employed during the night in taking the officers & crew from the Ship. She had about \_\_\_ killed & \_\_\_ wounded. The exact number could not be ascertained. Their own account was killed and 105 wounded. She had on board supernumeraries and all were about 450. She was six weeks from England bound to Bombay. On board were Lt. General Hyslop & suite, consisting of Major Walker, & Capt. Wood; a Surgeon's Mate, Lt. of Marines, and 2 Sea-Lts. passengers, together with Capt. Marshall, a master and commander, who all were actively employed during the action.

Dr. Evans emphasized sanitary measures aboard the ship. He asked the Captain for stricter hygienic standards for the crew, adequate supplies of food including citrus, and ample bedding and clothing which should be boiled periodically. He requested two washing days per week instead of one. His concern over small pox is



reflected in the following letter dated April 16, 1816 to Ben Thomas of the Navy Department:

Sir: The appearance of the small pox on board of the Macedonia, a few days ago, brought to my recollection a plan which I have often thought of suggesting to the Navy Department viz the propriety of issuing a circular directing the surgeons who attend recruiting rendezvous to examine strictly whether the recruit has ever had the small pox or kine pox, and if he has not had either, directing him to vaccinate on the spot.

I am convinced that, besides keeping the small pox altogether from the Navy, it would tend to prevent the extension of that dreadful malady in our country. It has generally been conveyed from one point to another by means of vessels. The disease has been very rife and mortal in New York and Phila the past winter, but, there has not been a case of it in this town until one of the men shipped in New York for the Macedonia brought it a few days ago.

The horror associated with the appearance of this disease at sea amongst a crew many of whom have never had it, can be described by the officers of the Guerriere and Congress, both of which vessels were visited by it on their return from the Mediterranean.

If Congress would pass a law prohibiting the employment of any seaman in a merchant vessel, who could not produce satisfactory proof of having had either the small or kine pox, and requiring similar proof before a passenger could be admitted into ports, the disease might be eradicated from the country. The expense would be no obstacle because there are persons in any port who vaccinate the poor gratis: and sailors are such thoughtless and improvident animals as to require some such compulsory stimulus. This practice would have another advantage: it would prevent the loss of many of this valuable class of citizens in foreign ports, by this disease; and consequently, the hazard of much valuable property by having the vessel weakly manned.

An order of this kind would not be attended with any expense to government, since the surgeon would keep a supply of virus not only sufficient for his own use, but would be able to accommodate physicians of the town with it in a fresh and pure state.

I beg you will excuse the liberty I have taken in addressing you, and be sure that in so doing I have been actuated by the best motives. With much respect

A A Evans

Dr. Evans was a Med Chi member and was a censor for Cecil County in 1831 and 1840. He died in Elkton on January 15, 1848, and is buried in the family plot at the Presbyterian church. A small unpretentious tombstone marks his grave (Figure 5). His fellow citizens urged him to run for the Maryland governorship on several occasions. He could have achieved fame and fortune, but preferred to minister to the sick in his small town, riding his faithful roan on housecalls. He left two sons and a daughter. One son, General Andrew Wallace Evans, was a West Point graduate who served in the Union Army. The other son, Alexander Evans, was a lawyer who served three terms in Congress.

### Summary

Amos Evans MD exemplified the best in American medicine in the early 1800s. His initial medical training was an apprenticeship with a country doctor. Later he supplemented his knowledge with formal training



**Figure 5.** Grave of Amos Alexander Evans MD, Presbyterian Church Cemetery, Elkton, MD. He was the author's great-great grandmother's brother.

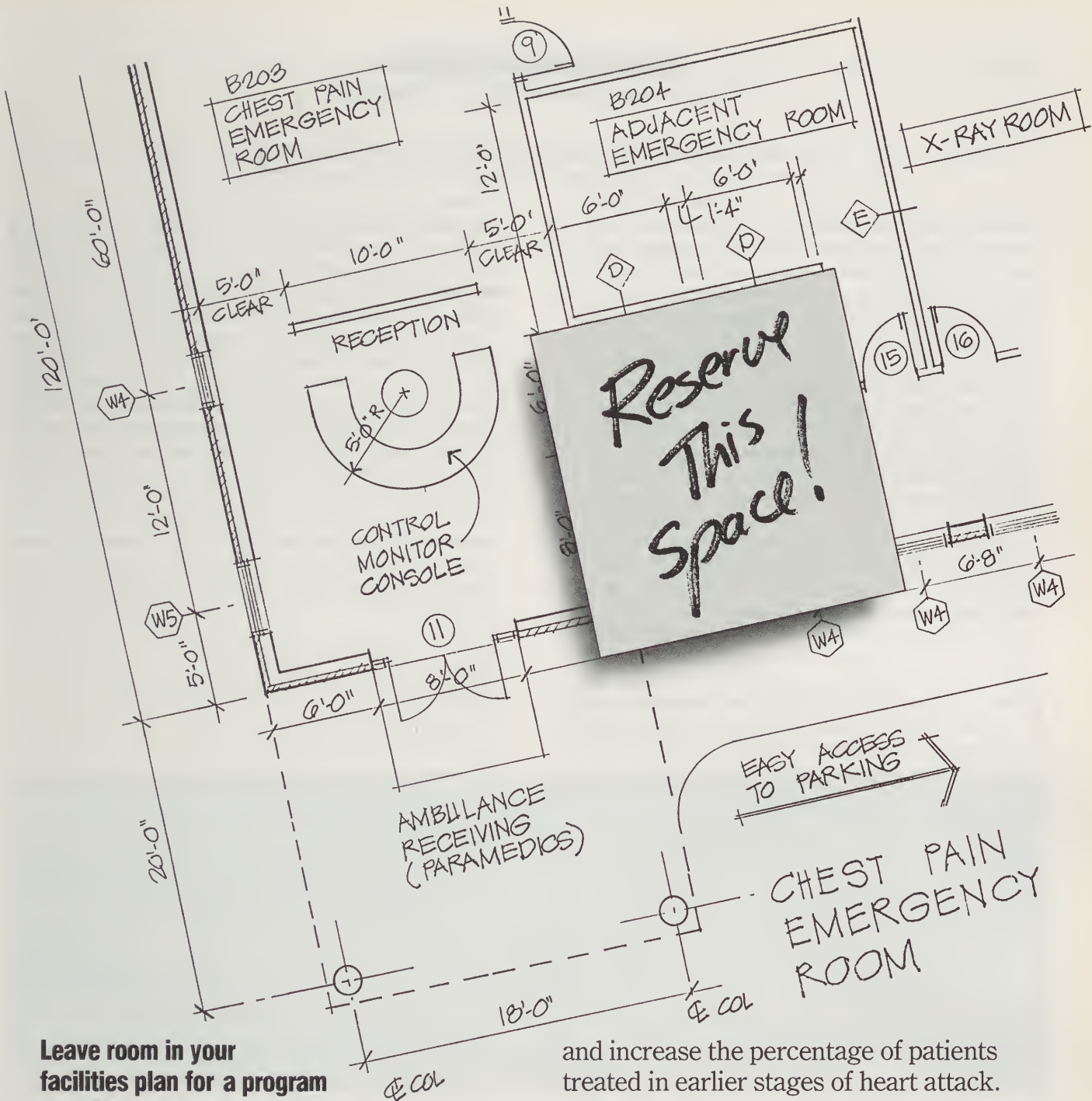
under Drs. Rush and Physick in Philadelphia. His records indicate that he used contemporary therapies (amputations, bleeding, purging, blistering, and medications) judiciously and usually effectively. His compassion, keen intellect, and scientific curiosity about a broad range of subjects shine through his writings. Dr. Evans was the surgeon on the USS Constitution during her most glorious moments. He was the right man at the right place at the right time.

His records have been scattered far and wide. Fortunately, their interest and value have been recognized and they have been preserved. His example contributed greatly to the standardization and improvement of naval medical care. His recommendations for medical examination of all recruits and vaccination of all not immune to small pox were adopted. He has fittingly been called the Father of American Naval Medicine. After his move back to Elkton, Maryland, his practice flourished and he was a much-loved community leader. He died on January 14, 1848, at age sixty-three.

### References

1. Campbell DA. Surgeon to the USS Constitution. *Surg Gynecol Obstet* 1966; 123:1326-30.
2. Medical prescription book kept on board USS Frigate Constitution by Dr. Amos A. Evans, Surgeon on Board, March 26, 1812-August 27, 1812. Courtesy of Clements Library, University of Michigan, Ann Arbor, Michigan.
3. Medical prescription book kept on board USS Frigate Constitution by Dr. Amos A. Evans, Surgeon on Board, August 28, 1812-March 5, 1813. Courtesy of Historical Library, Yale University School of Medicine, New Haven, CT.
4. Cushman P Jr. Naval surgery in the War of 1812. *NY State J Med* July 15, 1972:1881-87.
5. Wynn GH. The case book of Dr. Amos A. Evans. *Ann Mcd History* January 1940:70-8.
6. Journal kept on board the United States Frigate Constitution, 1812, by Amos A. Evans, Surgeon, United States Navy. *The Pennsylvania Magazine of History and Biography*. 1895; 19:152-69, 374-86, 468-80.
7. Bradburn HB. The medical log of Old Ironsides. *Conn Mcd* 1976; 40(12):859-68.





**Leave room in your facilities plan for a program that fills beds and saves lives: Early Cardiac Care.**

Designate a center at your hospital where adults can check out early warning symptoms of heart attack. You can get more cardiac patients into your hospital at a time when your medical staff can do the most to help them. An Early Cardiac Care Center, combined with effective cardiac outreach programs to increase awareness of cardiac symptoms, will increase Cardiac Care Unit admissions—

and increase the percentage of patients treated in earlier stages of heart attack.

Get to the heart of the heart attack problem in your community. For more information on how to establish an Early Cardiac Care Center, contact: Raymond D. Bahr, M.D., FACP

**St Agnes Hospital**

900 Caton Avenue  
Baltimore, Maryland 21229  
(301) 368-3200

### Why Did My Symptoms of Hypoglycemia Change?

*Doctor, I am twenty years old and developed diabetes about six months ago. At first, I was on intermediate acting insulin (NPH). My control was very erratic and regular insulin was added to my twice daily injections of NPH. I began having frequent episodes of hypoglycemia manifested by the usual symptoms of nervousness, rapid heart rate, and sweating. Although these symptoms occurred two or three times a day, they were easily treated by the use of juices; I found them more annoying than frightening. However, I was advised to discontinue the NPH and Regular insulins and begin one injection of Ultralente Insulin before breakfast each day. Now I wake up every morning with a headache and, about half the time, I have a lack of muscle coordination and maybe a little mental confusion. When I test my fasting blood glucose, it is about 40mg/dl. After I take my insulin and have breakfast, the headache and other symptoms disappear. Why do I have these new hypoglycemic symptoms and not those of a few weeks ago?*

The usual symptoms of hypoglycemia produced by a rapid acting insulin are those of a fairly sudden fall in blood glucose levels resulting in epinephrine

release as a counter regulatory mechanism. The symptoms of an epinephrine infusion are nervousness, rapid heart rate, and sweatiness. When the insulin was changed to a long-acting type, the blood glucose fall was slow and passage through the epinephrine release phase was gradual, so it went unnoticed. The next phase of hypoglycemia consists of neurological manifestations -- headache, possible lack of muscle coordination, mental confusion and, if untreated, hypoglycemic coma. Not recognizing the early symptoms of hypoglycemia and having nocturnal or very early morning reactions manifested by neurological symptoms are the greatest risks in the use of the long-acting insulin. Better diabetic control can probably be obtained by returning to NPH and Regular insulin injections, and making dietary changes where necessary to cope with the hypoglycemic episodes. When making insulin adjustments, there should be a wait of two or three days before changing the dose, in order to obtain a better baseline for that dose. Chasing hyperglycemic test results with more insulin produces a rebound phenomenon which is really iatrogenically induced brittle diabetes.

DEWITT E. DELAWTER MD  
Editor



#### FOR SALE

Owning your own medical office offers the following advantages:

- Avoid Rent Escalation
- Guarantee Your Practice Location
- Pay Less Personal Taxes
- Build Equity In Real Estate

#### ANNOUNCING

A new 45,000 square foot Medical Office Condominium  
**ESSEX COMMUNITY MEDICAL CENTER**  
Superbly located across from Franklin Square Hospital Center

**Call: Amtrade International (301) 391-3080, FAX (301) 653-5093**



### Recurrent Upper Respiratory Infection, Persistent Paravertebral Thoracolumbar Muscle Spasm, and Fatigue Associated with Chronic Active Epstein-Barr Virus Infection

During the past four years, I have seen numerous patients -- without a history of infectious mononucleosis -- who have had recurrent upper respiratory infection, significant paravertebral thoracolumbar muscle spasm, and chronic fatigue associated with persistently high antibody titers to Epstein-Barr virus (EBV) antigens. The EBV antibody levels, particularly IgG antibodies to viral capsid antigen (VCA-IgG), antibodies to EBV early antigens (EA-Ab), and antibodies to EBV nuclear antigens (EBNA), were significantly higher in patients with this syndrome than in asymptomatic, presumably healthy, individuals. This suggests that these patients were suffering from a syndrome in which a latent EBV infection may have been reactivated. Many patients with this syndrome responded favorably to treatment with ibuprofen, a nonsteroidal anti-inflammatory agent. Three typical cases presented as follows.

#### Case Reports

**Patient 1.** A forty-eight-year-old woman presented with complaints of persistent posterior cervical and perithoracic pain radiating laterally to the anterior chest wall. She had had fatigue for the previous three months and a nagging cough of about four months duration. The preceding year she had had a persistent upper respiratory infection which lasted four to five weeks.

Examination revealed a blotchy erythematous pharynx without significant cervical lymphadenopathy, bilateral serous otitis media, and muscle spasm of the left paravertebral thoracolumbar area which followed the course of the erector spinae muscles.

The EBV antibody titers are shown in the Table. A twenty-six-test biochemical profile revealed no significant abnormal test results. The sedimentation rate was 11 mm; the sputum culture was negative; and the leukocyte count was 4,000/mm<sup>3</sup> with 56 percent lymphocytes. A chest x-ray was within normal limits.

The patient was treated with ibuprofen (600 mg tid) and misoprostol (200 mg tid). The pain in her spine subsided, the fatigue disappeared, and the cough cleared.

**Patient 2.** A fifty-four-year-old woman first presented with complaints of fatigue and persistent upper respiratory symptoms. Examination revealed only mild bronchitis. The EBV antibody titers are shown in the Table. The patient was treated with ibuprofen (800 mg tid) and her symptoms disappeared.

Two months later, the fatigue and persistent upper respiratory symptoms returned. Complaints concerning back pain were difficult to determine because the patient had had prior lumbosacral disc surgery. She was treated with ibuprofen and an antitussive. Her EBV antibody titers at that time and five months later (when she was asymptomatic) are shown in the Table.

About six months later, the patient presented with severe persistent bronchitis, extreme fatigue, and severe back pain. Examination revealed a blotchy pharynx without significant lymphadenopathy, harsh bronchial sounds, and severe spasm of the right posterior thoracolumbar area which followed the path of the erector spinae muscles. She had a white blood count (WBC) of 8,500/mm<sup>3</sup> with 80 percent granulocytes and 20 percent lymphocytes. The EBV antibody titers are shown in the Table. Ibuprofen (600 mg tid), misoprostol (200 mg tid), ciprofloxacin (500 mg bid), and bed rest were prescribed. A chest x-ray was within normal limits. Significant improvement was noted when she was seen one week later.

**Patient 3.** This fifty-two-year-old woman had been previously treated for hiatal hernia, hypertension, glucose intolerance, and fibrocystic breast disease. Her past history included two to three episodes of bronchitis per year and cervical radiculopathy.

About two years ago, she presented with an acute upper respiratory infection and fatigue. Her EBV antibody titers are shown in the Table. She responded slowly to erythromycin and a cough expectorant.

Three months later, she presented with severe right paravertebral thoracolumbar muscle spasm which followed the course of the erector spinae muscles. The EBV antibody titers at this time are shown in the Table. The patient was treated with ibuprofen (800 mg tid) and she responded favorably.

Three months later, she returned with acute bronchitis, unilateral right paravertebral muscle spasm, and fatigue. The pain radiated to the right hip. X-rays of the chest and right hip were negative. X-rays of the lumbosacral spine showed mild degenerative changes. A bone scan was normal. A magnetic resonance image (MRI) of the cervical spine two years earlier had been within normal limits. The EBV antibody levels are shown in the Table. The patient was given fenoprofen calcium.

Eight months later, the patient returned and com-

**Table. EBV Antibody Reciprocal Titers**

	VCA-IgG	EA-Ab	EBNA
<b>Patient 1</b>			
Initial	640	80	80
Two months	2560	80	320
<b>Patient 2</b>			
Initial	640	ND*	40
Two months	640	40	160
Seven months	640	40	40
About one year	2,560	40	640
<b>Patient 3</b>			
Initial	2,560	ND*	40
Three months	640	10	40
Ten months	1,280	ND*	80
Fifteen months	5,120	10	80

\*ND = Not done.



plained of a backache. Again, examination revealed right paravertebral muscle spasm. Her WBC was 4,500/mm<sup>3</sup> with 40 percent lymphocytes. Her EBV antibody titers are shown in the Table. She was treated with ibuprofen (800 mg tid) and cimetidine. She has improved significantly and is currently being followed.

### Comments

These three aforementioned patients are representative of other patients I have seen in my practice. They present with a painful local muscle spasm in a distinct area (the paravertebral thoracolumbar region) with the pain being referred along the path of the erector spinae muscles. The chronic fatigue and recurrent upper respiratory infections are also prominent features of this syndrome. The signs and symptoms of this syndrome do not necessarily occur at the same time. Patients may present initially with an upper respiratory infection, and later with the characteristic muscle spasm and fatigue. Others may present with all three signs and symptoms at the same time.

The muscle spasms found in these patients resemble the myofascial pain syndrome,<sup>1</sup> and the fibromyalgia syndrome.<sup>2,3</sup> These disorders are not uncommon; they affect some six million Americans.<sup>4</sup> Patients with myofascial pain syndrome and fibromyalgia syndrome have diffuse, chronic musculoskeletal pain that begins as a localized problem and then radiates to other areas. The pain of these two syndromes and the syndrome found in my patients have a definite paresthetic quality which mimics a neuropathy, suggesting that a neurotropic virus, such as EBV, may be responsible for the unexplained pain and profound fatigue. Neurologic complications can occur in primary EBV infection. In addition to encephalitis (which resembles aseptic meningitis), cases of Guillain-Barre syndrome, Bell's palsy, and transverse myelitis have been reported in primary EBV infection.<sup>5</sup>

Even though the chronic neurological sequelae of EBV infections are considered uncommon, a Bronx, NY physician has recently reported having as many as forty to fifty patients with EBV-related neurological disease in his practice.<sup>6</sup> This report is in line with the relatively large number of patients that I am seeing in my practice who apparently have a neuropathy associated with a chronic EBV infection.

Significant serial changes in the EBV-specific antibody levels of these patients indicate that EBV may be one of the etiologic agents responsible for the muscle spasm, fatigue, and upper respiratory infections. All of these patients have had high levels of EBV antibody titers, specifically VCA-IgG, EA-Ab, and EBNA, which are consistent with reactivated past infection.<sup>7</sup>

This syndrome should be included in the list of EBV-associated diseases, such as chronic mononucleosis-like syndrome, even though the possibility of other known and as yet unidentified viruses has not been explored. The likelihood of another virus as a causative or casual agent is high in view of the recent dis-

covery of a second widespread strain of EBV,<sup>8</sup> and the identification of several genomically distinct strains of EBV circulating among students at a California University.<sup>9</sup>

Numerous disease states are associated with EBV, including infectious mononucleosis, Burkitt's lymphoma, and nasopharyngeal carcinoma. The EBV is ubiquitous to humans. It invariably causes chronic infections in all persons it infects. It is a deoxyribonucleic acid (DNA) oncogenic virus. And, it has a close association with the immune system because it has an apparent tropism for B-lymphocytes. Epstein-Barr virus-related lymphoproliferative syndromes associated with immunosuppression have been observed in patients receiving cyclosporine-A after renal and bone marrow transplantation, as well as in patients with acquired immunodeficiency syndrome (AIDS).<sup>7</sup>

The EBV integrates its genome into circulating B-lymphocytes where it has a lifelong residency in the immune system. In this regard, it is a potentially devastating pathogen. More immuno-related diseases associated with EBV are being reported. For example, EBV has been implicated in the pathogenesis of rheumatoid arthritis (RA),<sup>10</sup> and significantly high levels of antibodies to EBV antigens have been found in patients with familial RA.<sup>11</sup> This suggests that an immunoregulatory defect may exist in some patients with RA as well as in patients with the syndrome described here.

It is noteworthy that patients with this syndrome have usually responded favorably to ibuprofen. In fact, ibuprofen seems to have significantly shortened the course of the disease. In this regard, it is tempting to speculate that ibuprofen, and perhaps other nonsteroidal anti-inflammatory drugs, may have a direct or indirect action in affecting the virus(es) responsible for this syndrome.

### References

1. Kine GD, Warfield CA. Myofascial pain syndrome. *Hosp Pract* 1986; 21(9):194B-6.
2. Golenberg DL. Fibromyalgia syndrome. An emerging but controversial condition. *JAMA* 1987; 257:2782-87.
3. Goldenberg DL. Diagnostic and therapeutic challenges of fibromyalgia. *Hosp Pract* 1989; 24(9A):39-52.
4. Bennett RM. Fibromyalgia *JAMA* 1987; 257:2802-3.
5. Grose C, Henie W, Henie G et al. Primary Epstein-Barr virus infections in acute neurologic diseases. *N Engl J Med* 1975; 292:392-8.
6. Weinstein MW, Straus SE. Epstein-Barr virus: Transfusion and fetal risks *JAMA* 1990; 264:1726.
7. Lennette ET. Epstein-Barr virus. In: Lennette EH, Balows A, Hausler WJ Jr, Shadomy HF, eds. *Manual of Clinical Microbiology*. Fourth Edition. Washington, DC: American Society for Microbiology. 1985; 728-32.
8. Sixbey JW, Shirley P, Chesney PJ et al. Detection of a second widespread strain of Epstein-Barr virus. *Lancet* 1989; 2:761-5.
9. Lung ML, Chang RS. Longitudinal study of Epstein-Barr virus genotypes associated with infectious mononucleosis patients and healthy carriers. *J Infect Dis* 1990; 162:994-5.
10. Alsbaugh MA, Henie B, Lennette E, Henie W. Elevated levels of antibodies to Epstein-Barr virus antigens in patients with rheumatoid arthritis. *J Clin Invest* 1981; 67:1134-40.
11. McDermott M, Molloy M, Buckley J, Grealley J. Antibodies to Epstein-Barr viral antigens in familial rheumatoid arthritis. *Irish J Med Sci* 1989; 158:203-5.

TERENCE A. MCGUIRE MD

Reprints: Terence A. McGuire MD, The McGuire Clinic, 311 Addison Road South, Seat Pleasant, MD 20743.



# Continuing...

For over fifteen years, the Med Chi Agency has been serving the needs of Maryland physicians...*your* needs, with unrivaled commitment and dedication. And as the Agency has grown, so has your trust...in us, in our products and in the way we do business with you.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial options. Among these are:



Professional Liability Insurance (Malpractice)



Personal insurance, including homeowners, auto, boat and recreational vehicle coverage and personal umbrella insurance.



Office insurance, including medical equipment, medical records, computer equipment, account receivables, workers compensation, business auto and employee dishonesty



Financial and estate planning, specifically tailored to the medical professional.



Individual and group, life, health and income protection.



Qualified and non-qualified Retirement Planning

## ...A Commitment To Service



**THE MED CHI AGENCY**  
1204 Maryland Avenue  
Baltimore, Md. 21201-5583  
(301) 539-6642  
1-800-543-1262 (in Maryland)  
FAX (301) 752-5421



# Confidential

Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians with a confidential and nondisciplinary focus.

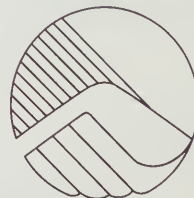
Addiction.....Marital/Family Conflicts.....Psychiatric Illness.....Organic Impairment.....Physical Handicap.....If these problems exist, we can help find the solutions. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families. The Committee is **NONDISCIPLINARY** and information is kept **CONFIDENTIAL**. If you, a colleague, or family member is in need of our services call:

**(301) 962-5580**

Toll free **1-800-992-7010**

Message line **(301) 727-0120** (24 hours a day, 7 days a week) Leave a message.



**Physician  
Rehabilitation  
Committee**

*HELPING IS OUR BUSINESS...If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation  
1211 Cathedral Street, Baltimore, Maryland 21201  
Please note on your donation: "Physician Rehab"*



## Board of Physician Quality Assurance Actions

### In the Matter of James E. Crosby MD Before the Maryland Board of Physician Quality Assurance

#### Consent Order

On December 29, 1988, the State Board of Physician Quality Assurance (the Board), pursuant to its authority under *Md. Health Occ. Code Ann.*, §14-504, summarily suspended the license of James E. Crosby MD (the Respondent) to practice medicine in Maryland in an Order for Emergency Suspension of Right to Practice Medicine (the Emergency Order).

At the same time, the Respondent was charged under *Md. Health Occ. Code Ann.*, §14-504(a)(28) (1988 Cum. Supp.).

Section 14-504(a)(28) provides:

Subject to the hearing provisions of §14-505 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:

(28) sells, prescribes, gives away, or administers drugs for illegal or illegitimate medical purposes.

On February 1, 1989, a settlement conference was held. At the settlement conference, Dr. Crosby stated that he did not contest his summary suspension. On February 22, 1989, a second settlement conference was held. At the second settlement conference, Dr. Crosby provided the Settlement Officers with a contract into which he had entered with the Physician Rehabilitation Committee of the Medical and Chirurgical Faculty of Maryland (the Committee). On October 3, 1990, a third settlement conference was held. As a result of the third settlement conference a proposal for resolving the outstanding charges was presented to the Board. At its meeting on October 24, 1990, the Board agreed to accept this Consent Order which resolves the charges under the Maryland Medical Practice Act and vacates the Order for Emergency Suspension of the Right to Practice Medicine.

#### Findings of Fact

1. Respondent was licensed to practice medicine in the State of Maryland on June 28, 1965.
2. Respondent's license to practice medicine in Maryland was summarily suspended on December 29, 1988.
3. Respondent was Patient A's primary physician from 1982 until November 1988 and treated Patient A for chronic obstructive pulmonary disease (COPD). In February 1988, Patient A became bedridden due to several crushed vertebrae. Patient A complained of severe back pain. Respondent treated Patient A at Patient A's home from February 1988 until April 7, 1988. During that time, Respondent prescribed Levodromoran and Demerol for relief of Patient A's pain.

5. Patient A was hospitalized at Frederick Memorial Hospital from April 7, 1988 to May 4, 1988.

6. Patient A returned home on May 4, 1988 and Respondent resumed primary care of Patient A. Respondent visited Patient A at home at least every other day from May 5, 1988 until Patient A was hospitalized on November 7, 1988.

7. From May 5, 1988 until November 7, 1988, Respondent wrote prescriptions for Demerol for Patient A which Patient A's wife took to several pharmacies. Whenever Respondent prescribed Demerol for injection, Respondent instructed Patient A's wife to have the prescription filled and give the vial to Respondent at his office. Patient A's wife did as Respondent instructed and gave the vial to either Respondent or Respondent's wife at Respondent's office immediately after the prescription was filled. Whenever Respondent prescribed Demerol tablets for Patient A, Respondent instructed Patient A's wife to get the prescription filled and put the Demerol tablets on Patient A's bedside. Patient A's wife did as Respondent instructed.

8. On several occasions, while Respondent was visiting Patient A, Patient A's wife saw Respondent open the bottle containing Demerol tablets on Patient A's bedside table and put Demerol tablets into Respondent's pocket.

9. While Patient A was bedridden, Patient A received Demerol injections from either Respondent or Respondent's wife, a nurse. No one other than Respondent or Respondent's wife gave Patient A Demerol injections. Either Respondent or Respondent's wife brought the vial of Demerol to Patient A's home for the injection. When Respondent and Respondent's wife left Patient A's home, they took the vial of Demerol.

10. In August 1988, Respondent's wife gave Patient A's wife a prescription for injectable Demerol written in the name of Patient A by Respondent. Respondent's wife asked Patient A's wife to get the prescription filled so that Respondent's wife could give it to another patient. Patient A's wife took the prescription to the pharmacy where it was filled. Patient A's wife gave the injectable Demerol to Respondent's wife. Patient A's wife believed that the Demerol was not intended for Patient A.

11. Based on certain information which came to its attention, the Board initiated an investigation into Respondent's practice of prescribing and dispensing controlled dangerous substances for Patient A.

12. In connection with the Board's investigation, the Division of Drug Control of the Department of Health and Mental Hygiene performed a drug survey of seven pharmacies in Frederick, Maryland where Respondent practiced medicine.

13. The drug survey revealed that Respondent wrote the following prescriptions for Patient A:



Prescription Number	Date	Drug	Strength	Quantity
906838	02/24/88	Levo-Dromoran	2 mg	24 tablets
906978	02/29/88	Levo-Dromoran	2 mg	48 tablets
907232	03/07/88	Levo-Dromoran	2 mg	24 tablets
543076	03/14/88	Meperidine	50 mg	50 tablets
543077	03/14/88	Meperidine	50 mg/ml	30 ml
543329	03/20/88	Meperidine	50 mg	100 tablets
543523	03/25/88	Meperidine	50 mg/ml	30 ml
543751	03/31/88	Demerol	50 mg/ml	30 ml
543752	03/31/88	Demerol	50 mg	100 tablets
545142	05/12/88	Demerol	50 mg/ml	30 ml
545141	05/12/88	Demerol	50 mg	100 tablets
909905	05/19/88	Demerol	50 mg/ml	30 ml
545728	05/27/88	Demerol	50 mg/ml	39 ml
910222	05/27/88	Demerol	50 mg	100 tablets
910445	05/31/88	Demerol	100 mg	150 tablets
910742	06/11/88	Demerol	50 mg/ml	30 ml
910973	06/17/88	Demerol	50 mg/ml	30 ml
911136	06/20/88	Demerol	100 mg	100 tablets
911190	06/24/88	Demerol	50 mg/ml	30 ml
911310	06/28/88	Demerol	50 mg/ml	30 ml
911647	07/08/88	Demerol	50 mg/ml	30 ml
911781	07/08/88	Demerol	100 mg/ml	10 ml
121774	07/08/88	Demerol	100 mg	70 tablets
911819	07/13/88	Demerol	50 mg/ml	50 ml
912084	07/21/88	Demerol	50 mg/ml	60 ml
912178	07/22/88	Demerol	100 mg	100 tablets
912322	07/27/88	Demerol	50 mg/ml	60 ml
912470	07/31/88	Demerol	50 mg/ml	60 ml
912749	08/09/88	Demerol	50 mg/ml	30 ml
912919	08/13/88	Demerol	50 mg/ml	30 ml
913001	08/15/88	Demerol	100 mg	100 tablets
913192	08/20/88	Demerol	50 mg/ml	60 ml
913374	08/26/88	Demerol	50 mg/ml	30 ml
913478	08/29/88	Demerol	50 mg/ml	30 ml
913574	08/31/88	Demerol	100 mg	20 tablets
913586	09/01/88	Demerol	50 mg/ml	60 ml
913707	09/01/88	Demerol	100 mg	20 tablets
913711	09/03/88	Demerol	50 mg/ml	60 ml
913807	09/07/88	Demerol	100 mg	100 tablets
913885	09/08/88	Demerol	50 mg/ml	30 ml
913945	09/10/88	Levo-Dromoran	2 mg	100 tablets
913969	09/12/88	Demerol	50 mg/ml	60 ml
914108	09/15/88	Demerol	50 mg/ml	60 ml
914318	09/20/88	Demerol	50 mg/ml	30 ml
914363	09/22/88	Demerol	50 mg/ml	60 ml
914486	09/25/88	Demerol	50 mg/ml	60 ml
431632	09/26/88	Demerol	100 mg	100 tablets
914647	09/29/88	Demerol	50 mg/ml	60 ml
431788	09/30/88	Demerol	100 mg/ml	20 ml
914777	10/02/88	Demerol	50 mg/ml	30 ml
914833	10/03/88	Demerol	50 mg/ml	60 ml
915002	10/07/88	Demerol	50 mg/ml	60 ml
432072	10/10/88	Demerol	100 mg/ml	20 ml
915149	10/11/88	Demerol	50 mg/ml	60 ml
432216	10/13/88	Demerol	100 mg/ml	20 ml
915267	10/14/88	Demerol	50 mg/ml	60 ml
915353	10/17/88	Demerol	50 mg/ml	60 ml
915571	10/21/88	Demerol	50 mg/ml	30 ml
915679	10/25/88	Demerol	50 mg/ml	30 ml
915773	10/26/88	Demerol	50 mg/ml	60 ml
915948	10/29/88	Demerol	50 mg/ml	60 ml
916065	11/01/88	Demerol	50 mg/ml	30 ml
916126	11/02/88	Demerol	100 mg/ml	20 ml
916251	11/05/88	Demerol	50 mg/ml	60 ml

14. Patient A had a history of COPD. Based on the amounts of Demerol prescribed by Respondent, Patient A was at risk for respiratory arrest if he actually received the amount of Demerol Respondent prescribed.

15. There was no medical reason for Respondent to

write a prescription for Demerol 50 mg/ml, 30 ml and Demerol 100 mg/ml, 10 ml, and Demerol 100 mg, 70 tablets on July 8, 1988.

16. Levo-Dromoran and Meperidine (Demerol) are Schedule II controlled dangerous substances.

17. It is unlawful for a practitioner to prescribe any controlled dangerous substances except in the course of his regular professional duties and in conformance with the provisions of Md. Ann. Code Art. 27, §§276 *et seq* (1987), and the standards of his particular profession relating to controlled dangerous substances.

18. Writing prescriptions for Demerol for one patient when the Demerol is intended for use by another patient is unlawful.

19. On or about February 21, 1989, Respondent entered into a five year advocacy contract with the Physician Rehabilitation Committee of the Medical and Chirurgical Faculty of Maryland. In April 1990, Respondent stopped his drug treatment and monitoring because of ill health.

### Conclusions of Law

Based upon the Findings of Fact, the Board concludes, as a matter of law, that Respondent sold, prescribed, gave away, or administered drugs for illegal or illegitimate purposes.

### Order

Based on the foregoing Findings of Fact, it is this 17th day of December 1990, by an affirmative vote of the majority of the full authorized membership of those members of the Board of Physician Quality Assurance of Maryland who considered this case,

ORDERED that the Order for Emergency Suspension is VACATED and the Respondent's license to practiced medicine in the State of Maryland SUSPENDED. Within four weeks of the effective date of this Order, the date being the date the Board executes this Order, Respondent is placed on the following conditions of probation for a period of six months from the date of this Order:

1. Respondent must enter into a Board-approved contract with the Committee and comply with all conditions of that Physician Rehabilitation Advocacy Contract dated November 29, 1990. Respondent must sign within ten days of the effective date of this Order a release, authorizing the Committee to release any and all information to the Board whenever the Board requests any information.

2. Respondent must successfully complete a Board-approved refresher course in the general practice of medicine. Respondent must submit a description of the course to the Board for approval within sixty days from the effective date of this Order. Successful completion of the refresher course does not count toward completion of the continuing education requirements.

3. Respondent agrees to sign releases permitting the Board to obtain information about Respondent



from any other relevant individuals or organizations as requested by the Board, and be it further

ORDERED that if Respondent does not comply with the above described conditions within six months from the date of this order, Respondent's license to practice medicine will be REVOKED WITHOUT PRIOR NOTICE AND AN OPPORTUNITY TO BE HEARD, and be it further

ORDERED that if Respondent complies with the above described conditions within six months from the date of this Order, the Board will entertain a petition for Respondent to take the Special Purpose Examination (SPEX) in June 1991, and be it further

ORDERED that if Respondent successfully passes the SPEX with a passing grade of at least 75, Respondent may submit a petition to the Board to stay the suspension of his license; i.e., a petition for reinstatement of his license. In the petition for reinstatement, Respondent must include a description of his anticipated practice and must also agree not to prescribe controlled dangerous substances in his practice. The Board may impose conditions of probation if the Board decides to stay the supervision of Respondent's license, and be it further

ORDERED that Respondent will be responsible for all costs incurred under this Consent Order, and be it further

ORDERED that this Consent Order is considered a public document pursuant to *Md. State Gov't Code Ann.* §§10-611 *et seq.*

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of 11 pages.

1. By signing this Consent, I hereby submit to this Order and its conditions.

2. I acknowledge the validity of this Order and the legal authority of the Board of Physician Quality Assurance to issue and enforce this Order.

3. I acknowledge that by consent to this Order, I am waiving my right to challenge in court the legal authority of the Board of Physician Quality Assurance to take emergency and summary action against my license to practice medicine in the State of Maryland.

I, James E. Crosby MD, have read this Consent Order and have carefully reviewed each and every part with my attorney, James W. Respass. I understand it and voluntarily agree to it.

I sign and consent to this Order after having an opportunity to consult with counsel and with full understanding of the meaning and terms of the Order.

JAMES E. CROSBY MD



**In the Matter of  
Arthur M. Lebson MD  
Before the  
Maryland Board of  
Physician Quality Assurance**

**Order for Summary Suspension of License to  
Practice Medicine**

The Board of Physician Quality Assurance (the Board) herein sets forth the following background information as pertinent to this Order for Summary Suspension (the Summary Suspension) with regard to the license of Arthur M. Lebson MD (the Respondent) to practice medicine in the State of Maryland:

1. The Respondent is a physician licensed to practice medicine in the State of Maryland. The Respondent specializes in Internal Medicine and Geriatrics. The Respondent has been licensed to practice in Maryland since 1974.

2. The Respondent is presently practicing medicine at Fords Lane, Baltimore, MD. The Respondent has privileges at Sinai Hospital, Homewood Hospital Center, Baltimore County General Hospital, Seton Hill Manor Nursing Home, Harford Garden Center, Milford Manor Nursing Home, Meridian Nursing Center - Randallstown, and Wyman Park/Homewood Hospital Center North.

3. In 1990, the Medicaid Fraud Unit of the Attorney General's Office of the State of Maryland initiated an investigation into Respondent's practice. During the course of the investigation, information was obtained from certain patients who alleged that Respondent prescribed controlled dangerous substances to patients with known substance abuse problems in return for sexual favors. Since this information was directly pertinent to and raised concerns regarding the public health, safety and welfare, this information was referred on November 13, 1990 by the Medicaid Fraud Unit to the Board of Physician Quality Assurance.

4. Following receipt of the complaint, the Board commenced an investigation of the Respondent's medical practice. This investigation focused on information obtained from three areas: (1) interviews of certain patients who asserted that sexual favors were being exchanged for drugs; (2) surveys of Respondent's prescribing practices; and (3) consultation with experts in the field of drug and alcohol abuse.

5. The results of the investigation into claims that drugs were exchanged for sexual favors are summarized in Section A of this Order.

6. The results of the investigation regarding Respondent's prescribing practices are detailed in Section B of this Order.

### SECTION A

7. Several interviews of female patients and, in some cases, their boyfriends and husbands, were conducted by investigators of the Medicaid Fraud Unit of the Attorney General's Office during October and November, 1990.



8. The results of these interviews demonstrate a disturbing pattern of behavior usually involving Respondent's demands for sexual favors in return for controlled substances, sexual activity between Respondent and patient in Respondent's office and, in some instances, the reduction of controlled substances where sexual favors were denied.

9. The activity set forth in Paragraph 3 above was confirmed by a Board investigator in face-to-face interviews with certain patients.

10. The results of this investigation are summarized as follows:

*Patient A*<sup>1</sup> had been on a Methadone program prior to seeing Respondent. Patient A's office visits included complete physical examinations, AIDS testing, and prescriptions for Xanax, Placidyl, Desyrel, Tuinal, Pamelor and Klonidin. Patient A stated that for a period of five years she performed sexual acts with the Respondent at his office in exchange for his giving her prescriptions for numerous controlled dangerous substances. Patient A last visited Respondent's office in 1989 at which time Respondent reduced the quantity of controlled substances prescribed to Patient A.

*Patient C* stated that she began seeing the Respondent at his office in 1977 when her family physician retired. Patient C saw the Respondent from 1977 until 1979, during which time he had been treating her for obesity and had been prescribing Preludin and Fastin. Patient C did not see Respondent again until May, 1988. She went to the Respondent after having surgery and after receiving a prescription for Percodan and Valium from her surgeon. Patient C went to the Respondent seeking a general medical doctor and relief from her back pain.

During Patient C's first visit to the Respondent in 1988, she states that Respondent gave her a complete physical and asked her about sexual relations with her boyfriend.

Subsequently, Patient C would see Respondent once every two weeks and Respondent would give her at least three prescriptions on each visit. During this time period, Respondent provided prescriptions at various intervals for Percodan, Prozac, Elavil, Tegretol, Xanax, and Dilaudid.

Patient C states that Respondent made sexual advances toward her during office visits.

Patient C stopped seeing the Respondent in June 1990 and, thereafter, entered a hospital for detoxification and rehabilitation. Patient C states that she now attends Narcotics Anonymous regularly and has a new medical doctor who is also her drug counselor.

*Patient D* stated that she was treated by the Respondent for a brief period of time after being referred to him by some people at her drug program.

Patient D stated that the first time she saw Respondent everything about her examination was routine. Respondent drew blood and gave her a breathing test. She advised Respondent that she was a former drug addict and that she was on Methadone. Her presenting complaint was of depression and she asked for Xanax. At the end of her first session with Respondent,

Respondent wrote her a prescription for Xanax and another drug.

Patient D stated that on her second visit to the Respondent, while she was waiting for her prescription, Respondent made sexual advances toward her. The Respondent asked Patient D to go on a date with him and she responded saying she had a boyfriend and she could not do that. Patient D indicated that the Respondent then told her that he was going to have to cut her medicine down. The Respondent then wrote a prescription for Xanax in an amount that was less than she had received on a previous visit.

On her third visit, she was again alone in the room with the Respondent when he made sexual advances. She again pushed him away and refused his offer of going out with him. At that time, the Respondent told her he was going to cut down her medication and he proceeded to give her a prescription for fewer Xanax than on previous visits.

On her fourth and final visit, the Respondent once again made sexual advances. On her refusal to comply, Respondent again told her that he was going to cut her medication down. He then gave her a prescription for Xanax in an amount less than that received on previous visits.

Patient D also stated that the Respondent grabbed her breasts so hard they were bruised. These bruises were, on at least one occasion, observed by her boyfriend. Patient D said that his handling of her breasts was extremely painful.

*Patient E* stated that sometime early in the 1980s she was on a methadone program and met another patient of the Respondent's who advised Patient E that she could get Ativan from the Respondent.

During her first appointment with Respondent, one of his nurses took vital signs and placed her in an examining room. The Respondent came in several minutes later, and after talking with her, made sexual advances. When Patient E objected and stated that she was a paying customer, the Respondent continued and requested sexual favors from Patient E. The Respondent wrote her prescriptions and then left. Patient E stated that she had an appointment with the Respondent every month for approximately six to eight months and at each visit she performed sexual acts with the Respondent in order to obtain the prescriptions she desired.

After approximately six to eight months of appointments with the Respondent, Patient E stopped going to see the Respondent. All the incidents between Patient E and the Respondent occurred during her scheduled medical appointments at Respondent's office.

*Patient F* had her first appointment with the Respondent in late 1987 or early 1988. At her first appointment with the Respondent, a nurse took her history and vital signs. The Respondent then conducted breathing tests and drew blood. At that time, the Respondent requested sexual favors from Patient F. Each time Patient F went to see the Respondent until May of

<sup>1</sup> Patient names are not used in the Summary Suspension. The Board maintains a list of patient names which corresponds to the alphabetical letter used in the Summary Suspension.



1990, the Respondent requested sexual favors from Patient F.

Patient F received prescriptions from the Respondent for Percocet, Xanax, and Elavil. At some appointments, Respondent gave Patient F samples of Xanax without a prescription. During the time that Patient F was being treated by the Respondent, he would sometimes require her to call and schedule appointments for Saturday or Sunday. During these weekend appointments, Respondent would request sexual contact with her in exchange for drug samples or prescriptions. On one occasion, the Respondent had Patient F call to meet him at the hospital. She went to the hospital and had him paged. When he met her in the lobby of the hospital, he directed her to meet him at his office several hours later. When Patient F went to his office he wrote her prescriptions and then requested sexual contact. While at his office, the Respondent provided her with some sample blister packs of Xanax.

### SECTION B

11. Pharmacy surveys and a review of the pertinent medical records reveal that the Respondent is prescribing controlled dangerous substances with blatant disregard for the potential for abuse and drug dependency. Respondent's prescribing practices are below the standard of care in the following instances:

*Patient G:* Pharmacy records reveal that the Respondent prescribed the following controlled dangerous substances for Patient G:

Date	Drug	Quantity
1/30/89	Xanax 1 mg	100
2/24/89	Percocet	20
	Xanax 1 mg	100
6/13/89	Percocet	40
	Xanax 1 mg	100
2/20/90	Roxicet	50
	Xanax 1 mg	60
	Phenobarbital 30 mg	100
3/20/90	Percocet	
	Xanax 1 mg	75
4/20/90	Percocet	60
	Xanax 1 mg	75
	Phenobarbital 30 mg	100
6/08/90	Phenobarbital 30 mg	100
	Xanax 1 mg	75
	Percocet	50
6/11/90	Percocet	50
7/06/90	Xanax 1 mg	75
	Percocet	60
8/08/90	Roxicet	50
	Xanax 1 mg	75
	Phenobarbital 30 mg	100
9/07/90	Xanax 1 mg	75
	Roxicet	60

Xanax is indicated for the management of anxiety disorders or for the short-term relief of the symptoms of anxiety. The effectiveness of Xanax for long-term use (i.e., more than four months) has not been established by systematic clinical trials. According to the *Physicians' Desk Reference (PDR)*, "the physician should periodically reassess the usefulness of the drug for the individual patient."

The usual starting dose of Xanax is 0.25 to 0.5 mg

given three times daily. Writing an initial prescription for 100 Xanax 1 mg and prescribing 60 Xanax 1 mg less than three weeks after the first prescription, exceeds the recommended daily dose. In addition, continuing to write prescriptions for Xanax for nine months indicates Respondent's unwillingness to recognize the risk that the patient may become dependent upon the drug.

Roxicet and Percocet are narcotic analgesics which may be habit-forming. Prescribing these narcotics for nine months increases the risk of drug dependency.

By prescribing Xanax, Roxicet, and Percocet for nine months, the Respondent increased the likelihood that Patient G would become dependent on one or more of these drugs. The medical records indicate that the patient was admitted for detoxification in August 1988 and February 1990. In April 1990, the Respondent noted that the patient "is still occas IVDA [intravenous drug abuser]."

*Patient H:* Upon the initial visit, Respondent diagnosed Patient H as an intravenous drug abuser with low back pain. A review of Patient H's medical chart reveals that Respondent wrote the following prescriptions:

Date	Drug	Quantity
09/8/89	Percocet	50
10/6/89	Percocet	50
11/28/89	Percocet	60
12/01/89	Percocet	60
	Placidyl	15
02/13/90	Percocet	40
02/27/90	Percocet	60
03/27/90	Percocet	60
07/20/90	Percocet	50
	Desyrel	150
08/24/90	Percocet	40
09/23/90	Percocet	40
	Xanax 1 mg	40
11/26/90	Percocet	40
	Xanax 1 mg	60

According to the Respondent's note on December 1, 1989, the patient lost her husband and three-year-old daughter when a fire destroyed her home. Since everything was destroyed in the fire, the Respondent wrote another prescription for Percocet on December 1, 1989 and also prescribed Placidyl. On February 13, 1990, the Respondent noted: "still IVDA." On July 20, 1990, the Respondent recorded that the patient had been admitted to Greater Baltimore Medical Center for cocaine detoxification.

During the thirteen months that the Respondent treated Patient H, the Respondent occasionally referred to the patient's low back pain as "better" or "worse." However, there is no medical assessment by the Respondent of the pain nor is there any attempt to treat the pain except to prescribe Percocet. Knowing the patient's history as an intravenous drug abuser, the Respondent's practice of prescribing Percocet for thirteen months created a risk that the patient might become dependent on Percocet.

On July 20, 1990, the Respondent noted that the Patient was still grieving about "death" and the

Respondent prescribed Desyrel, an antidepressant. On September 28, 1990, the Respondent noted "manic depressive illness" and prescribed Xanax, an anxiolytic. However, on November 6, 1990, the Respondent recorded "general stress" and prescribed Xanax. There is no objective data in either note to indicate how the Respondent arrived at his diagnoses. Changing medications without evaluating the efficacy of one drug versus another is below the standard of care. In addition, the chart is devoid of any reason for increasing the quantity of Xanax prescribed from 40 to 60. According to the *PDR*, anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic. In addition, the *PDR* cautions that physicians who prescribe Xanax to drug addicts should carefully supervise the patients' treatment because of the predisposition of such patients to habituation and dependence.

*Patient I's* medical records contain several references by the Respondent to Patient I's current status as an intravenous drug abuser. Pharmacy records reveal that the Respondent wrote prescriptions for the following controlled dangerous substances:

Date	Drug	Quantity
6/09/89	Roxicet	40
	Xanax 1 mg	75
7/03/89	Roxicet	20
	Xanax 1 mg	60
7/17/89	Roxicet	30
7/31/89	Roxicet	20
	Xanax 1 mg	60
8/21/89	Roxicet	40
	Xanax 1 mg	80
9/15/89	Vicodin	60
	Xanax 1 mg	60
9/29/89	Prometh VC Codeine	180 ml
10/12/89	Prometh VC Codeine	180 ml
10/13/89	Xanax 1 mg	60
11/10/89	Roxicet	30
12/14/89	Xanax 1 mg	50
01/10/90	Roxicet	25
	Roxicet	20
	Xanax 1 mg	50
02/13/90	Roxicet	20
	Prometh VC Codeine	240 ml
02/24/90	Xanax 1 mg	30
03/07/90	Xanax 1 mg	30
03/13/90	Prometh VC Codeine	180 ml
03/20/90	Prometh VC Codeine	180 ml
	Xanax 1 mg	30
03/22/90	Xanax 1 mg	30
04/16/90	Roxicet	30
	Xanax 1 mg	50
	Prometh VC Codeine	180 ml
04/25/90	Prometh VC Codeine	180 ml
05/14/90	Prometh VC Codeine	180 ml
05/24/90	Prometh VC Codeine	180 ml
06/15/90	Roxicet	30
	Xanax 1 mg	50
	Prometh VC Codeine	240 ml
06/27/90	Prometh VC Codeine	240 ml
07/13/90	Prometh VC Codeine	240 ml
09/17/90	Prometh VC Codeine	180 ml
	Roxicet	20
09/24/90	Prometh VC Codeine	180 ml
10/12/90	Prometh VC Codeine	180 ml
	Xanax 1 mg	45

10/19/90	Roxicet Prometh VC Codeine	20 180 ml
----------	-------------------------------	--------------

Beginning on September 15, 1989 and continuing through October 19, 1990, the Respondent prescribed Prometh VC Codeine, a narcotic cough suppressant which may be habit-forming. It is below the standard of care to prescribe a potentially addictive drug for such a long period of time to a known addict. In addition, the medical records do not reflect any valid assessment by the Respondent about the nature of the patient's cough or the efficacy of the Respondent's treatment.

Roxicet contains oxycodone, a narcotic which produces analgesia and sedation. Oxycodone can produce drug dependence and, therefore, has the potential for being abused. Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of this drug. Prescribing Roxicet from June 9, 1989 through October 12, 1990 to a known addict indicated Respondent's unwillingness to recognize the risk that the patient may become dependent upon the drug.

Prescribing Xanax, another habit-forming drug, from June 9, 1989 through October 12, 1990, increases the patient's susceptibility to become addicted to another drug. In addition, the effectiveness of Xanax for long-term use (i.e., more than four months) has not been established by systematic clinical trials.

*Patient J:* Pharmacy surveys and a review of Patient J's medical record reveal that the Respondent prescribed Dilaudid, a narcotic analgesic, for several years. In 1985, the Respondent wrote prescriptions for Dilaudid 4 mg and Dilaudid 2 mg at the same time. Often these prescriptions were written every seven days or less. In 1986, the Respondent prescribed Dilaudid 4 mg every two to four days for two months. In addition, in 1986, a consultant recommended that the Respondent change Patient J's Dilaudid to Tegretol. In 1987, the Respondent recorded that he planned to admit Patient J for detoxification because of his addiction to Dilaudid. The Respondent noted that the patient complained of "seizures" when Dilaudid was discontinued. However, the Respondent continued to prescribe Dilaudid 4 mg until July 1990 when the Respondent lowered the dose to 3 mg and then, 2 mg.

Dilaudid is a schedule II narcotic for the relief of moderate to severe pain. According to the *PDR*, physical dependence, the condition in which continued administration of the drug is required to prevent the appearance of a withdrawal syndrome, usually assumes clinically significant proportions only after several weeks of continued narcotic use. By continuing to prescribe Dilaudid for three years after the Respondent recognized that the patient was addicted to the drug demonstrates a careless disregard for the patient's health.

*Patient K:* On August 23, 1989, Patient K sought treatment from the Respondent. In the history and physical standardized sheet, the Respondent noted the chief complaint as "MVA (motor vehicle accident)



1980" and neck spasms. The Respondent diagnosed "DJD" (degenerative joint disease) and "COPD" (chronic obstructive pulmonary disease). A review of the medical record and a pharmacy survey reveal that the Respondent wrote the following prescriptions:

Date	Drug	Quantity
8/23/89	Darvocet-N-100	60
9/01/89	Vicodin	30 (refill x 1)
9/06/89	Vicodin (refill)	30
9/11/89	Darvocet-N-100	60
9/20/89	Vicodin	30
	Centrax	30
11/15/89	Darvocet	40
12/13/89	Darvocet-N-100	40
	Tranxene	50
4/02/90	Darvocet-N-100	40
	Tranxene	60
	Tenuate	20
4/30/90	Darvocet-N-100	40
	Tranxene	60
	Tenuate	30
	Noludar	30
6/04/90	Darvocet-N-100	40
	Tranxene	
	Noludar	30
7/03/90	Tranxene	
	Noludar	
7/31/90	Tranxene	60
	Noludar	
	Darvocet-N-100	40
8/28/90	Tranxene	
	Darvocet-N-100	40

Darvocet-N-100 and Vicodin are narcotic analgesics which may be habit-forming. When taken over long periods of time, Darvocet-N-100 and Vicodin can produce drug dependence characterized by psychic dependence, physical dependence, and tolerance.

Tranxene and Centrax are benzodiazepines indicated for the management of anxiety disorders or for the short-term relief of the symptoms of anxiety. Addiction-prone individuals should be followed closely by a physician because of the predisposition of such patients to habituation and dependence. Long-term use (i.e., greater than four months) has not been clinically assessed.

Tenuate is an anorectic stimulant. Noludar is a hypnotic agent which induces sleep. There is no indication in the patient's chart for simultaneously prescribing two sedatives, a stimulant, and a hypnotic on April 30, 1989.

The Respondent's prescribing practices constitute dangerous medical practice. Prescribing two sedatives, a stimulant, and a hypnotic on the same day; continuously prescribing Darvocet-N-100 for twelve months; and prescribing benzodiazepines for eleven months, demonstrates the Respondent's lack of knowledge as to the hazards of combining these controlled dangerous substances. In addition, the quantity of controlled substances prescribed on each occasion poses a risk to the patient's health because of the possibility that the patient may overdose.

*Patient L:* On August 22, 1989, Patient L sought treatment from the Respondent for low back pain. The Respondent diagnosed chronic obstructive pulmonary disease (COPD).

Pharmacy records reveal that the Respondent wrote prescriptions for the following controlled dangerous substances for Patient L:

Date	Drug	Quantity
8/22/89	Percodan	30
9/22/89	Roxicet	30
10/20/89	Roxicet	30
11/17/89	Roxicet	50
12/15/89	Roxicet	50
01/12/90	Roxicet	50
02/09/90	Xanax 1 mg	60
03/09/90	Roxicet	60
03/23/90	Roxicet	60
04/06/90	Xanax 1 mg	60
04/20/90	Roxicet	60
05/04/90	Percocet	60
05/07/90	Xanax 1 mg	60
05/18/90	Roxicet	60
06/01/90	Roxicet	60
06/15/90	Roxicet	60
06/22/90	Roxicet	60
07/20/90	Roxicet	60
08/03/90	Roxicet	60
08/24/90	Roxicet	60
09/07/90	Roxicet	60

Opiates are contraindicated for patients with COPD because opiates cause respiratory depression. Percodan, Roxicet, and Percocet are opiates. Prescribing opiates for Patient L, whom the Respondent diagnosed as having COPD, is below the standard of care. In addition, these drugs can produce drug dependence and, therefore, have the potential for being abused. Prescribing opiates from August 22, 1989 through September 7, 1990, reveals Respondent's lack of knowledge about their addictive potential and increases the risk to the patient of developing a drug dependency.

Prescribing 180 Roxicet within a twenty-two day period from June 1, 1990 to June 22, 1990, poses a threat to the patient's safety because of the possibility that the patient may overdose.

*Patient M:* The Respondent began treating Patient M in March 1988 and diagnosed that the Patient had "bronchitis." The Respondent noted that he would attempt to wean her off of Xanax but prescribed 100 Xanax 1 mg. Respondent continued to prescribe 100 Xanax 1 mg on each visit for "hyperactivity life long."

Upon learning that Patient M was pregnant, the Respondent reduced the Xanax dosage from 100 per visit to 80 per visit and then 60 per visit. The Respondent's failure to wean Patient M from Xanax while pregnant, unnecessarily placed the fetus at risk for drug dependence. The Respondent noted in Patient M's chart that the baby had no withdrawal problems at birth.

The Respondent's prescribing practices demonstrate his disregard for the potential harmful affect of Xanax upon the developing fetus and the possibility for drug dependence.

*Patient N:* Pharmacy records level that Respondent prescribed the following controlled dangerous substances for Patient N:

Date	Drug	Quantity
11/21/88	Xanax 1 mg	100
6/22/89	Xanax 1 mg	67
7/10/89	Xanax 1 mg	100
8/7/89	Xanax 1 mg	100
8/28/89	Xanax 1 mg	100
9/18/89	Xanax 1 mg	100
10/16/89	Xanax 1 mg	100
11/17/89	Xanax 1 mg	100
12/12/89	Xanax 1 mg	100
	Halcion 0.25 mg	30
1/8/90	Xanax 1 mg	100
	Halcion 0.25 mg	30 (refill x 1)
1/21/90	Halcion 0.25 mg (refill)	30
2/5/90	Xanax 1 mg	100
	Halcion 0.25 mg	60
	Hycomine Syrup	180 ml
3/5/90	Xanax 1 mg	100
	Halcion 0.25 mg	60
	Hycomine Syrup	180 ml
3/26/90	Halcion 0.25 mg	50
	Xanax 1 mg	100
4/23/90	Xanax 1 mg	75
	Halcion 0.25 mg	30
5/21/90	Xanax 1 mg	75
	Halcion 0.25 mg	30
6/11/90	Xanax 1 mg	60
	Halcion 0.25 mg	30
7/11/90	Xanax 1 mg	50
	Halcion 0.25 mg	30
8/6/90	Xanax 1 mg	50
	Halcion 0.25 mg	30
	Percodan	10
8/20/90	Xanax 0.5 mg	30
8/21/90	Darvon	40
	Doral	15
9/12/90	Halcion 0.25 mg	30
	Xanax 1 mg	30
9/13/90	Darvon	40

Xanax is indicated for the management of anxiety disorders or for the short-term relief of the symptoms of anxiety. The effectiveness of Xanax for long-term use (i.e., more than four months) has not been established by systematic clinical trials. Prescribing Xanax from November 21, 1988 to September 13, 1990 demonstrates Respondent's disregard for the indications and use of Xanax. In addition, prescribing Xanax for such an extended period of time reveals Respondent's unwillingness to recognize the risk that the patient may become drug dependent.

Upon learning that Patient N was pregnant, Respondent continued to prescribe Xanax and Hycomine, an opiate. It is not known whether Hycomine can cause fetal harm when administered to a pregnant woman. According to the *PDR*, babies born to mothers who have been regularly taking opioids prior to delivery will be physically dependent. In addition, Respondent's failure to wean Patient N off Xanax during her pregnancy increased the likelihood of withdrawal by the baby postnatally. Prescribing Hycomine and Xanax throughout the patient's pregnancy exposed the baby to Hycomine and Xanax withdrawal.

Halcion is a hypnotic agent useful in the short-term management of insomnia. Halcion enhances central nervous system depressant effects when co-admini-

stered with other psychotropic medications, such as Xanax, which also produces central nervous system depression. Both drugs may be habit-forming. By prescribing Halcion and Xanax simultaneously, the Respondent increased the patient's risk for further central nervous system depression and drug dependency.

*Patient O:* Pharmacy records indicate that Respondent prescribed the following controlled dangerous substances for Patient O:

Date	Drug	Quantity
5/16/89	Xanax 1 mg	60
7/11/89	Xanax 1 mg	60
	Roxicet	120
8/8/89	Xanax 1 mg	60
	Roxicet	60
8/29/89	Xanax 1 mg	60
9/22/89	Xanax 1 mg	60
9/26/89	Xanax 1 mg	60 (refill x 2)
10/24/89	Xanax 1 mg (refill)	60
	Roxicet	50
11/7/89	Xanax 1 mg (refill)	60
12/11/89	Xanax 1 mg	30
	Roxicet	50
12/18/89	Vicodin	50
	Xanax 1 mg	60 (refill x 2)
1/15/90	Xanax 1 mg (refill)	60
	Roxicet	60
2/1/90	Darvon-N-100	40
	Xanax 1 mg (refill)	60
2/12/90	Vicodin	50
	Roxicet	50
2/26/90	Darvon-N-100	40
2/27/90	Xanax 1 mg	60
3/5/90	Vicodin	50
3/19/90	Xanax 1 mg	30
	Darvon	60
4/6/90	Roxicet	40
	Xanax 1 mg	30
	Doriden	30
4/24/90	Xanax 1 mg	60
	Roxicet	30
5/4/90	Doriden	30
	Roxicet	40
	Darvon	40
	Vicodin ES	50
5/18/90	Doriden	30
	Roxicet	35
	Xanax 1 mg	60
5/30/90	Roxicet	30
	Xanax 1 mg	75
6/13/90	Doriden	30
	Roxicet	30
	Darvon	100
6/27/90	Roxicet	40
	Xanax 1 mg	60
7/11/90	Xanax 1 mg	60
	Darvon	60
7/31/90	Doral 15 mg	30
	Vicodin	40
8/13/90	Xanax 1 mg	60
8/31/90	Xanax 1 mg	60
	Darvon-N-100	40

Roxicet, Vicodin, and Darvon are analgesics which may be habit-forming. Prescribing these drugs on a regular basis for thirteen months increases the likelihood that the patient may become addicted to one or more of these drugs. In addition, there is no medical reason to prescribe three analgesics, Roxicet, Darvon and Vicodin, on May 4, 1990.



Prescribing Xanax, another habit-forming drug, for sixteen months demonstrates the Respondent's unwillingness to recognize the risk that the patient may become dependent.

*Patient P:* Pharmacy records reveal that the Respondent prescribed the following controlled dangerous substances for Patient P:

Date	Drug	Quantity
1/24/89	Xanax 1 mg	60
	Placidyl 500 mg	30
2/21/89	Xanax 1 mg	60
	Placidyl 500 mg	30
4/20/89	Xanax 1 mg	60
	Placidyl 500 mg	30
5/16/89	Placidyl 500 mg	30
	Xanax 1 mg	60
6/13/89	Placidyl 500 mg	30
	Xanax 1 mg	60
7/14/89	Placidyl 500 mg	30
	Xanax 1 mg	60
8/11/89	Xanax 1 mg	60
	Placidyl 500 mg	20
9/6/89	Xanax 1 mg	60
	Placidyl 500 mg	30
10/4/89	Xanax 1 mg	60
11/2/89	Xanax 1 mg	60
11/29/89	Xanax 1 mg	60
	Placidyl 500 mg	30
12/27/89	Xanax 1 mg	60
1/3/90	Placidyl 500 mg	30
1/23/90	Placidyl 500 mg	30
1/24/90	Xanax 1 mg	60
2/26/90	Xanax 1 mg	60
	Placidyl 500 mg	30
3/26/90	Xanax 1 mg	60
	Placidyl 500 mg	30
4/23/90	Xanax 1 mg	60
	Placidyl 500 mg	30
5/23/90	Xanax 1 mg	60
	Placidyl 500 mg	30
6/18/90	Xanax 1 mg	60
	Placidyl 500 mg	30
7/16/90	Xanax 1 mg	60
	Placidyl 500 mg	30
8/20/90	Xanax 1 mg	60
	Placidyl 500 mg	30
9/17/90	Xanax 1 mg	60
	Placidyl 500 mg	30

Xanax is indicated for the management of anxiety. Placidyl is indicated as short-term hypnotic therapy for periods up to one week in duration for the management of insomnia. According to the *PDR*: "Prolonged use of Placidyl may result in tolerance and psychological and physical dependence. Prolonged administration of the drug is not recommended."

Prescribing Xanax and Placidyl on a regular basis for twenty-one months exceeds the manufacturer's recommendations for use for both drugs. Maintaining a patient on one or both drugs for such a lengthy period of time increases the likelihood that the patient will become dependent on one or both drugs.

### Findings of Fact

Based upon the information received by the Board in connection with its investigation, the Board has reason to believe that the following facts are true:

1. The Respondent is a physician licensed to practice medicine in the State of Maryland and specializes in the practice of Internal Medicine and Geriatrics.

2. The facts set forth in Section A are incorporated by reference herein.

3. The facts set forth in Section B are incorporated by reference herein.

4. The Respondent's practice of prescribing large quantities of Xanax over an extended period of time without periodically assessing the efficacy of the drug for the individual patient poses a serious threat to the health of any patient with symptoms of anxiety who seeks treatment from the Respondent because the Respondent's prescribing practice increases the likelihood that the patient will become dependent on Xanax.

5. The Respondent's practice of prescribing potentially addictive drugs for a long period of time to known drug addicts poses a grave danger to any addict who seeks treatment from the Respondent because the Respondent's prescribing practice enables the addict to maintain the addiction or to substitute one addiction for another.

6. The Respondent's practice of maintaining a known drug addict on the same dose of Dilaudid for several years after the addict showed signs of physical dependence on Dilaudid shows a careless disregard for the patient's safety and poses an imminent danger to any addict who seeks treatment from the Respondent.

7. The Respondent's practice of prescribing opiates over an extended period of time for a patient with chronic obstructive pulmonary disease presents a serious threat to the patient's health because the use of opiates in patients with COPD increases the likelihood of respiratory suppression and death.

8. The Respondent's practice of simultaneously prescribing stimulants and hypnotics creates a dangerous situation for any patient for whom Respondent prescribes these drugs because one drug counteracts the effect of the other drug.

9. The Respondent's practice of prescribing benzodiazepines and opiates to pregnant patients creates a serious risk of harm to the newborn because the use of opiates during pregnancy increases the likelihood of chemical dependency in the newborn and the use of benzodiazepines during pregnancy increases the possibility of withdrawal symptoms in the newborn.

10. The Respondent's conduct with regard to patients A, C, D, E, and F demonstrates moral and unprofessional conduct in the practice of medicine.

11. Based upon its investigation and a review of the materials provided, the Board has reason to believe that the Respondent violated the *Md. Health Occ. Code Ann.* §14-504(a)(3),(4), and (28) (1990 Cum. Supp.). The pertinent provisions of §14-504 provide:

(a) Subject to the hearing provision of §14-505 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:

- (3) Is guilty of immoral or unprofessional conduct in the practice of medicine;
- (4) Is professionally, physically, or mentally incompetent;
- (28) Sells, prescribes, gives away, or administers drugs for illegal or illegitimate medical purposes.

12. The Respondent's retention of a license to practice medicine in Maryland and his ability to practice medicine and write prescriptions for controlled dangerous substances pose a grave risk and an imminent danger to the public health, safety, and welfare of the citizens of Maryland.

13. The Respondent's practice of prescribing controlled dangerous substances in both large quantities and large dose amounts represents a continuing danger to the health, safety, and welfare of the citizens of Maryland.

### Conclusions of Law

Based upon the foregoing facts, the Board finds that the public health, safety, and welfare imperatively require emergency action in this case, pursuant to *Md. State Gov't. Code Ann.* §10-405(b) (1984).

### Order

It is this 12th day of December 1990 by the State Board of Physician Quality Assurance:

ORDERED that pursuant to the authority vested in the Board by *Md. State Gov't. Code Ann.* §10-405(b) (1984), Respondent's license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver or have delivered to the Board:

- (1) his original Maryland license from the Board of Medical Examiners;
- (2) his renewal card for this license to practice medicine from the Board of Physician Quality Assurance;
- (3) his U.S. Drug Enforcement Administration Registration Certificate;
- (4) his Maryland Controlled Dangerous Substances Registration Certificate;
- (5) all samples of all prescription drugs in the possession of Anther M. Lebson and Arthur M. Lebson PA, including samples stored at both the Respondent's office and private residence; and
- (6) any prescription pads on which his name and DEA number are imprinted; and be it further

ORDERED that, should the Respondent fail to appear at the Board meeting scheduled for Wednesday, December 12, 1990 at 2:00 p.m., that this Order shall become effective immediately in accordance with *Md. Health Occ. Code Ann.* §14-507(d) (1990 Cum. Supp.) and is a public order and in accordance with *Md. State Gov't. Code Ann.* §10-617 (1984).;

And be it further ORDERED that all patient names ascertained in the course of this matter are protected as confidential records of the Board and cannot be disclosed except pursuant to *Md. Health Occ. Code Ann.* §14-510 and §14-510.1 (1990 Cum. Supp.).

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

■   ■   ■

## In the Matter of Murray Steinberg MD Before the Maryland Board of Physician Quality Assurance Consent Order

On December 12, 1990, the Board of Physician Quality Assurance charged Murray Steinberg MD (the Respondent) with a violation of *Md. Health Occ. Code Ann.*, §14-504(12) (Charge Letter).

Specifically, pursuant to *Md. Health Occ. Code Ann.*, §14-504 (1986), the Board charged that Respondent:

Subject to the hearing provisions of §14-505 of this subtitle, the [Board], on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:

- (12) Willfully makes or files a false report or record in the practice of medicine.

During negotiations concerning the allegations which form the basis for these charges, the Respondent was represented by Daniel Clements, Esquire and the Administrative Prosecutor was Nancy P. Tennis, Assistant Attorney General. As a result of these negotiations, the Respondent and the Administrative Prosecutor agreed to enter into the following Consent Order, which includes Findings of Fact, Conclusions of Law and Order. The Consent Order was subsequently presented to, and accepted by, the Board on December 12, 1990.

### Findings of Fact

1. At all times relevant to these charges, the Respondent was and is licensed to practice medicine in Maryland.

2. On July 7, 1987, Dr. Steinberg was performing surgery on a Patient A who was scheduled for a laparoscopy and a possible laparotomy. During the course of the operation, Dr. Steinberg determined first that a laparotomy was required and subsequently decided that a hysterectomy was also necessary. He performed both operations that day.

3. The admission note in Patient A's chart, however, included the following sentence: "After reviewing the situation with her, I do not feel that we have any other means to diagnose this problem except by laparos-



copy, if the findings at laparoscopy warrant laparotomy we will go ahead with the procedure, however if total abdominal hysterectomy is indicated, patient prefers that we wait until the problem is discussed with her."

4. As Dr. Steinberg was about to perform the hysterectomy, the anesthesiologist for Patient A's operation saw the admissions note and questioned Dr. Steinberg as to whether the patient had consented to a hysterectomy.

5. Dr. Steinberg stated that she had consented to a hysterectomy. At that point, he consulted the patient's family and obtained their permission to perform the operation.

6. At some point following the operation, Dr. Steinberg removed the original admissions note from the hospital records of Patient A. He filed a second note in place of the first. The second note was identical to the first except that Dr. Steinberg omitted the phrase "however if total abdominal hysterectomy is indicated, patient prefers that we wait until the problem is discussed with her."

### Conclusions of Law

Based on the foregoing Findings of Fact, the Board concludes that the Respondent willfully made or filed a false report or record in the practice of medicine. Accordingly, the Board concludes, as a matter of law that the Respondent has violated §14-504(12) of the Act.

### Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 12th day of December, 1991, by the Board, hereby:

ORDERED that Respondent be REPRI-MANDED; and be it further

ORDERED that Respondent submit to a peer review six months from the date of this Consent Order; and be it further

ORDERED that the above-mentioned peer review shall be performed by physicians who have not conducted a prior review of Respondent and that the peer review, if unfavorable, could result in an investigation of Respondent under Health Occupations Article, §14-501; and be it further

ORDERED that this is a final order and as such is considered a public document pursuant to State Government Article, *Annotated Code of Maryland*, §§10-611 *et seq.*

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Consent

By this Consent, I hereby admit to the Findings of Fact contained in this Order. I hereby agree to be bound by the foregoing Consent Order and its conditions and restrictions.

I am entering into this Consent Order for the purpose of resolving the charges initiated by the Board of Physician Quality Assurance against my license to practice medicine as defined in the Charge Letter.

I acknowledge the validity of this Order and the legal authority of the Board of Physician Quality Assurance to issue and enforce this Order.

I hereby waive any right to appeal this matter under §14-508 of the Health Occupations Article, *Annotated Code of Maryland*.

I understand that if I fail to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice medicine in the State of Maryland.

I sign and consent to this Order after having an opportunity to consult with my counsel, Daniel M. Clements, Esq., and with full understanding of the meaning and terms of the Order.

MURRAY STEINBERG MD

## You Manage The Office Let Us Do The Rest!

Low Cost Initial Investment  
Daily Management Reports  
Accounts Receivable Report  
Service Analysis Report  
Aging Reports  
BC & BS of MD Forms  
MediCare Forms  
Medical Assistance Forms  
Electronic Submission

Claims Resubmission  
HCFA 1500 Forms  
Third Party Billings  
On-Line Trans. History  
Creating Patient Statements  
Statement Mailing Services  
On-Going Support  
In-House Training  
Complete Documentation

To Put The Computer Center, Inc.  
Mainframe Computer To Work  
For You, Just Call:

(301) 728-3883

## UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

- |                    |   |
|--------------------|---|
| <b>September 6</b> | <b>Current Concepts in Ophthalmology: 11th Annual Clinical Conference</b> , at the Columbia Inn, Columbia, MD. 6 Cat 1 AMA/PRA credits. Fee: \$75.                |
| <b>October 4-5</b> | <b>Medical Consultation and Management in the Perioperative Period</b> , at the Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Lorraine Zaganas, 301-328-6598. |
| <b>October 4-6</b> | <b>Seventh Annual Maryland Contact Lens Symposium</b> , at the Turf Valley Hotel and Country Club, Ellicott City, MD. 12 Cat 1 AMA/PRA credits. Fee: \$165.       |
| <b>November 8</b>  | <b>Controversies in Pharmacology and the Elderly</b> , at the Omni International Hotel, Baltimore, MD. Credits and fee to be determined.                          |

### Continuously Throughout the Year

**Visiting Professor Program** - A directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.

**Visiting Practitioner Preceptorships** - Opportunities for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Hour-for-hour Cat 1 AMA/PRA credits available. Direct all inquiries to CME 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.



## PHYSICIAN'S RECOGNITION AWARD

### Recipients

During April 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Bhagavan, Belur S.  
Brown, Stephen Robinson  
Brown, William George  
Cosimano, Salvador J.  
Flynn, Robert Lawrence  
Ginsberg, Milton

Guba, Alexander M.  
Howe, Luke A.  
Judd, Kenneth Patrick  
Kress, Morton Allen  
Linhardt, George Elmer  
Mausner, Mark Ellis

Merrill, Roger Clay  
Myers, Henry J.  
Oldham, Roger Jay  
Porter, Roger John  
Shigo, John Joseph



## MISCELLANEOUS MEETINGS

- August 14-17** **West Virginia Medical Society Annual Meeting**, at The Greenbrier, White Sulphur Springs, WV. Cat 1 AMA/PRA credits available. Fee: \$125 members; \$175 nonmembers. Info: Nancie Divvens, 304-925-0342.
- September 13-14** **Nutrition Support in the Cancer Patient**, sponsored by the Maryland Society for Parenteral Enteral Nutrition, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Cat 1 AMA/PRA credits available. Fee: \$10 members; \$20 nonmembers. Info: B. Pharoan MD, 301-661-9300.
- October 21-22** **The Fifth Annual National Disability Management Conference**, sponsored by the Washington Business Group on Health (WBGH), at the Crystal Gateway Marriott in Arlington, VA. Fee: \$375 WBGH members; \$450 nonmembers. Info: Heather Patterson, 202-408-9320.
- October 24-26** **Eighteenth Anniversary: New Techniques and Concepts in Cardiology**, sponsored by the American College of Cardiology, at the Hyatt Regency Hotel, Washington DC. Info: Registration secretary, 301-897-2695.

**Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.**

- |              |  |
|--------------|--|
| July 11      | Surgical Management of Mitral and Aortic Valve Disease |
| July 18      | A New Approach to Migraine                             |
| July 25      | Controversies in Central Venous Catheterization        |
| August 1     | Overview of the Norplant System                        |
| August 15    | HCFA Substandard Care Regulations                      |
| August 22    | Kidney and Pancreas Transplantation                    |
| August 29    | AIDS Panel Discussion                                  |
| September 5  | Acute Pain Management                                  |
| September 12 | Osteoporosis: Update for the 90s                       |
| September 19 | New Assisted Reproductive Technologies                 |
| September 26 | Investigation of Child Abuse (A Panel Discussion)      |

**American College of Emergency Physicians, 1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.**

- |              |   |
|--------------|---|
| September 5  | Board of Directors Meeting                  |
| September 21 | Oral Board Preparation and Private Tutorial |
| October 17   | Executive Committee                         |

### Maryland Advertisers

To advertise in *MMJ* call:  
**Network Publications**  
**301-235-0500**

## We Build Beautiful Sunlit Home Additions



**FOUR SEASONS GREENHOUSES**  
 Design & Remodeling Centers

**Sunspace Design Studio, Inc.**

**(301) 882-6200**

MHIC 16069

## THE JOHNS HOPKINS MEDICAL INSTITUTIONS

July 29 - August 2

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

**Control of Biohazards in the Research Laboratory.** Info: Dr. Byron Tepper, 301-955-5918 or Dr. Jacqueline Corn, 301-955-9334.

Continuously  
Throughout the Year

**Visiting Preceptorship in Pediatric Critical Care Medicine.** Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. Info: 301-955-2959.

**Ophthalmic Electrophysiology Technician Training Course.** Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. Info: C. Kearney 301-955-2959.

**Ophthalmology Grand Rounds.** Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. Thursdays, 7:30-9:00 am. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700.

**Neuro-ophthalmology Conference.** Held twice per month. Info: 301-955-5700.

**Cornea Conference.** Held monthly. Info: 301-955-5700.

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.

### Information for Authors

Manuscripts may be sent to Editor, **MMJ**, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

#### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

Include full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles.

Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 typed pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in **MMJ** is protected by copyright and may not be reproduced without the written permission of both the principal author and **MMJ**.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.



Dear Carl,

Congratulations on your new medical staff leadership position! Now you're not only a physician — you need to be a manager, negotiator, arbitrator, and even a parliamentarian. I wish I had received some special training when I first took a position like yours!

Sincerely,

Helen

## Do you have the skills to do the job?

Chief-of-staff. Department chairman. Committee chair.

Tough jobs, but somebody has to do them — sometimes even with no formal training and little leadership experience.

Now, through a new American Medical Association training program, you can sharpen the skills you need to face the challenges of leadership with confidence and authority.

### **Interactions: A Medical Staff Leadership Program**

This intensive day-and-a-half program will help sharpen your ability to:

- Resolve conflict among peers
- Negotiate with the board and administration
- Manage medical staff affairs
- Develop bylaws that enhance staff effectiveness
- Run meetings effectively and purposefully

### **Learn from the Experienced**

*Interactions* was developed by experts in medical staff leadership and field tested by more than 100 medical staff leaders nationwide. The faculty includes experienced physician leaders as well as management and legal experts. Program features lectures, discussions, and break-out sessions on all aspects of medical staff leadership.

### **Take the Challenge**

If you have recently been chosen for an important leadership position — chief of staff, department chairman, committee chair, or another key post — *Interactions* will develop the skills and confidence to succeed in your new role.

Choose the dates and location that are best for you.

September 6-7, 1991

October 18-19, 1991

Seattle, Washington

Boston, Massachusetts

**Sign up today!**



**TO REGISTER, CALL 1-800-621-8335**

MasterCard, Visa, American Express or Optima

AMA members \$395    Non-members \$495    CF 030091

**CHIEF OF OB/GYN:  
MANAGED CARE**

Total Health Care, Inc., an HMO and Community Health Center Corporation serving low income residents of West Baltimore, seeks a Board Certified OB/GYN to develop and direct prenatal care programs in our four sites, as well as to coordinate over 1,000 deliveries at university affiliated and community hospitals. Experience in a managed care setting is preferred. Send CV and cover letter to: Claude Hill MD, Chief Executive Officer, Total Health Care, Inc., 1501 Division St., Baltimore, MD 21217. Total Health Care, Inc. is an equal opportunity employer.

**PHYSICIANS WANTED**

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

**CHIEFS**

**EMERGENCY MEDICINE** - Church Hospital is seeking candidates for CHIEF OF EMERGENCY MEDICINE. Church Hospital is a busy, not-for-profit, 216 bed medical/surgical community hospital located in Baltimore, MD. Emergency visits total over 21,000 per year. Candidates should be Board Certified and should have significant administrative and clinical experience in an Emergency Room of comparable size. Responsibilities of the Chief include both administrative and clinical duties. Excellent salary and benefit package. Inquiries and curriculum vitae should be sent to: Mr. William Opfer, Vice President, CHH Medical Service Corporation, 100 N. Broadway, Baltimore, MD 21231

**PSYCHIATRIST**

Columbia - Busy child/family-oriented practice seeks additional psychiatrist. Send CV to Bob Goshen MD, Suite 207, Medical Arts Building, Columbia, MD 21044 (301-964-9484).

**PEDIATRICIAN**

Pediatric Group, Baltimore suburb, desires pediatrician for employment, leading to full partnership. Send resume to Box 9, 9121 Reistertown Road, Owings Mills, MD 21117.

**OFFICE SPACE**

Attractive office space available to share with an established practice. Affordable rent, full exam and x-ray facilities within the office and receptions staff. Located in Luther-ville, convenient from the Beltway. Contact Kim Kitson at 301-296-1255.

**MARYLAND/EASTERN SHORE**

Opportunity for career-oriented full-time Emergency Physician to practice in an ideal setting. Memorial Hospital at Easton is a 217 bed, level II center with 18,000 ED visits per year and offers a top notch salary and benefit package (including 8 weeks paid annual leave), CME, supportive Administration and excellent medical staff back up. The Easton area offers the best of Chesapeake Bay recreation, food and family life.

Please contact: Richard A. Marasa, M.D., FACEP  
Chief, Emergency Department  
Memorial Hospital  
South Washington Street  
Easton, Maryland 21601  
1-800-666-3222 Ext. 5607



EOE

**Medical Newsletter On  
HOW TO PASS BOARD  
OF  
INTERNAL MEDICINE**

**To Be Mailed From March To August 1991**  
For a **FREE** Sample Copy  
Mail Your Address Card To:  
**Medical Newsletter**  
5 Cullen Drive, West Orange N.J. 07052.

**RIVA BAY OFFICE PROPERTIES, INC.**

**GRAND OPENING MARCH 1ST 1991 • CUSTOM FINISHED MEDICAL SUITES**  
**A NEW concept in Medical Office Space**

**Prime, Prestigious Location** - Convenient to Baltimore, Washington and Anne Arundel Medical Center

**Turn Key Operation** - Custom Medical Suites finished for medical practice use

*Ample Free Parking; Janitorial Service Included; Receptionist, Spacious Central Waiting Area;  
Court Yard; Signage; Option of On-Site Radiology and On-Site Laboratory*  
**40% Preleased!**

For more information and a personal tour, please call Dr. Robert Marine or Susan Best  
2525 Riva Road, Annapolis, Maryland 21401 (301) 269-7992 Balt./ (301) 858-5035 Wash.



**BEL AIR OFFICE TO SHARE**  
OB/GYN practice wishes to sub-lease space in new office. Morning & afternoon hours available. Office to open July 1, 1991. Please contact Lorraine O'Connor at 339-7640.

**FURNISHED OFFICE SPACE TO SHARE**  
St. Joseph Professional Building. Private consultation room. Recently renovated. Call 821-5758 or 828-5100.

**MEDICAL OFFICE FOR SALE OR LEASE**  
2000 sq ft in excellent location near Cross Keys in medical office building. Very convenient to most major hospitals. Contact Rick Tucker at 727-8347.

**MEDICAL OFFICE SUITE FOR LEASE**  
Osler Medical Center, Towson; near St. Joseph Hospital, GBMC, and Sheppard Pratt Hospital. Info: R.R. Kent MD, 301-323-5831 or 301-461-9922.

**MEDICAL OFFICE EQUIPMENT - MUST SELL**  
Exam tables, cyro, ultrasound, colposcope, lamps, phones, book case, and more. Call 301-798-5564 or 301-618-2244.

**PROFESSIONAL RESUMÉ SERVICES**  
Successfully serving physicians since 1976. All specialties. Effective! Confidential. We provide curriculum vitae preparation, cover letter development and career planning. Immediate service available. Call 1-800-933-7598 (24 hrs). Alan Kirschen, M.A.

**MMJ**  
**Classified Advertising**

*Med Chi Members:*  
\$5 per line per insertion

*Physician Nonmembers:*  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment. Ad cancellations must be received in writing seven weeks prior to the first of the month.

Send ad replies or new ad copy to:  
**MMJ**, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

**BECO MANAGEMENT, INC.**

**Medical Suites Available**

- Montgomery Village Professional Center  
19201 - 19271 Montgomery Village Avenue  
Gaithersburg, Maryland
- Southern Medical Building  
9131 Piscataway Road  
Clinton, Maryland
- Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland
- White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland
- Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland
- Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

BECO Management, Inc. owns and manages all of these top quality medical office facilities. BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550



*Bright Oaks Courtyard*

2021 EMMORTON ROAD (RTE. 924) • BEL AIR, MD 21014

**20,000 Square Ft. Professional Office Buildings**

- Easy Access to I-95 & Rt. 24
- Close Proximity to residential & commercial developments
- Customized suites
- HVAC gas, elevators, ample parking
- Competitive rates
- Tenant allowances

**Contact: C.H. Goldberg, MT-(ASCP); CIBN**  
**(301) 893-1800**  
**1-800-767-7070**

Developed by:

**WARD & LAMBDIN**

REAL ESTATE DEVELOPERS



**ROBERT WARD REALTY INC.**

## FELLS POINT MEDICAL BUILDING

The FELLS POINT MEDICAL BUILDING will be a 40,000 foot multi-speciality medical building at the corners of Fleet and Central Streets. It is part of the Inner Harbor complex. Occupancy of the building will be late 1992. Leases are available.

Some board certified surgical sub-specialities as well as all medical specialities are needed. A walk-in clinic will be open 18 hours a day-seven days a week.

Serious inquiries only. Contact:

**Lewis B. Newberg, M.D.**  
(301) 988-9529  
FAX: (301) 461-3430

## FAMILY PRACTICE/ INTERNAL MEDICINE

### Montgomery County, Maryland

Grow with an established multispecialty group in lucrative thriving metro area. Develop own practice within group and enjoy unlimited income potential. Excellent benefits include paid malpractice. Multi-site positions available at Mt. Airy and Rockville. Reply in confidence to:

Cheryl A. Dolan, Administrator  
Montgomery Medical Group, P.A.  
15235 Shady Grove Road, Suite 103  
Rockville, MD 20850  
or call (301) 417-7270

## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Anne Salmon Barone, Ph.D., M.D.  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000

## NMR of America, Inc.

in conjunction with

**Cogan & Smith Radiologists, P.A.**

has completed the initial closing of

**Harford County Imaging Partners**

A Delaware Limited Partnership

The undersigned acted as sole placement agent for the offering.

## Peregoff Rottman Barron Incorporated

World Trade Center, 401 East Pratt St., Suite 323, Baltimore, Maryland 21202  
(301) 727-5445 • 800-423-9614



# YOUR SPECIALTY IS WORTH AN EXTRA \$8,000 A YEAR.



with a small added obligation later on. If you'd like to talk to an Army Reserve physician, or if you'd like more information about the stipend program or other medical opportunities, call our experienced Army Reserve Medical Counselor:

Major Michael W. Salmons  
(301) 997-3526 Collect

If you're a resident in any of the following specialties:

- anesthesiology
- orthopedic surgery
- general surgery
- neurosurgery
- colon/rectal surgery
- cardiac/thoracic surgery
- pediatric surgery
- peripheral/vascular surgery
- plastic surgery

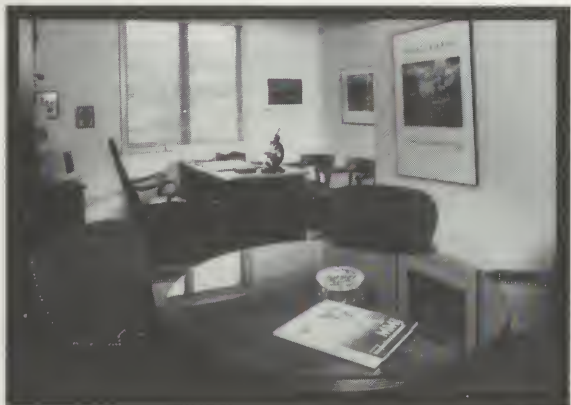
you could be eligible for an \$8,000 annual stipend in the Army Reserve's Specialized Training Assistance Program.

You'll also be using your skills in a variety of challenging settings, from major medical centers to field hospitals, and there are opportunities for conferences and continuing education.

We know your time is valuable, so we'll be flexible about the time you serve. Your immediate commitment could be as little as two weeks a year,

**BE ALL YOU CAN BE.<sup>®</sup>**  
**ARMY RESERVE**

INTERIOR DESIGN • SPACE PLANNING •  
FURNITURE & CABINETRY SELECTION • CUSTOM  
CABINETRY • SURGI-CENTERS • SURGERY &  
AMBULATORY CARE FACILITIES • MEDICAL &  
DENTAL OFFICES • LABORATORIES • MEDICAL  
OFFICE BUILDINGS • CONSTRUCTION  
ADMINISTRATION • COST ESTIMATING



**LEVIN/BROWN & ASSOCIATES**  
ARCHITECTS/INTERIOR DESIGNERS

17 Warren Road  
Suite 7B  
Baltimore, MD 21208  
(301) 486-9006

**THE MAGNIFICENT SEVEN ARE AT YOUR SERVICE.**



**T**he seven PSA Financial affiliated companies are specialists, each in its own sphere of operation. Individually and in combination, they provide financial services, risk management and investment counseling to the medical profession, and over the years have gained recognition as outstanding performers in their several fields.

Contact any of our affiliates to enjoy the satisfaction and sense of security that comes from having probably the best financial service specialists in the business on your side.

Planning for our  
Clients Financial Future  
Since 1928.



**PSA Financial Center**  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

**PSA Professional Liability, Inc.**  
*Malpractice Insurance*

**PSA Financial, Inc.**  
*Employee Benefits*

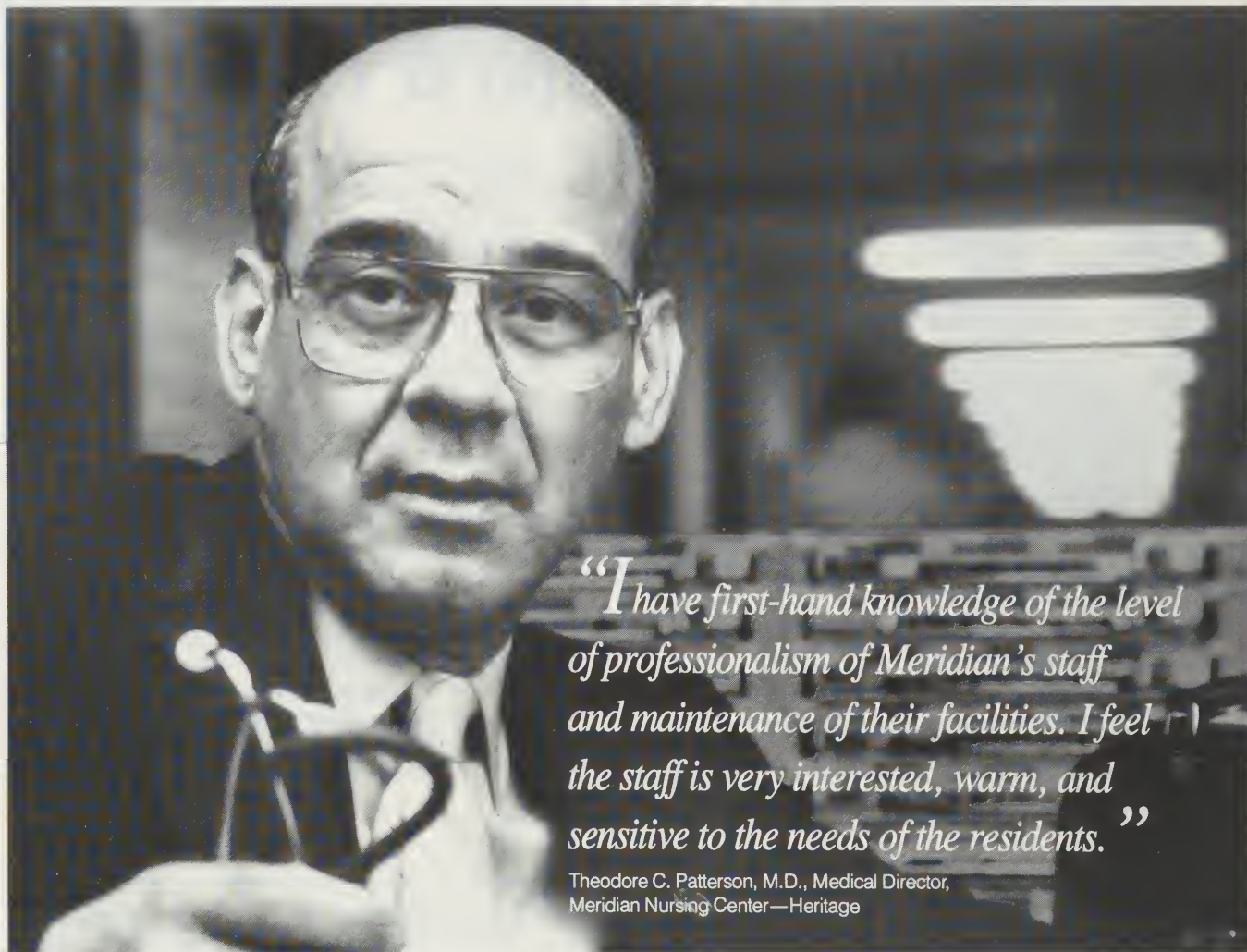
**PSA Financial Advisors, Inc.**  
*Financial Planning*

**PSA Capital Management, Inc.**  
*Investment Management*

**PSA Pension Services, Inc.**  
*Design & Administration*

**PSA Insurance, Inc.**  
*Agents & Brokers*

**PSA Equities, Inc.**  
*Broker / Dealer*



*“I have first-hand knowledge of the level of professionalism of Meridian’s staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents.”*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer’s patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there’s our full-time activity directors, social workers, and dieticians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





# Social Service or Business? Perspectives on Hospitals.

Hospitals today are solving problems that didn't exist five years ago. As you'd expect, many of these are medical challenges. But an increasing number involve another side of health care—rapidly changing technology, scarce personnel, non-traditional business ventures and more.

These are complex and sensitive issues, and you need to know about them. They'll have a significant impact on your health care—its cost, its quality, and even its availability.

In this article, we look at forces which have made these issues high priorities for hospitals and for Baltimore.

## The dilemma—can hospitals be both?

The chief task of a hospital is preserving life and caring for the sick. No mission is more critical than quality patient care.

Yet, hospitals must respond strongly and effectively

to problems facing them from the other side of health care—the business side. If they do not, the quality and even the availability of health care in our community will be jeopardized.

## The financial pressures are rising.

Historically, hospital charges covered costs plus a modest amount to pay for new equipment and to keep facilities current. In the early 1980's, Medicare nationally put a cap on what it would pay, much the same as when Maryland began regulating hospital rates in the early 1970's.

While the limits on reimbursement have proven

effective in moderating increases in prices, one pitfall is that less money is available now to pay the bills and keep equipment and facilities in good order. In 1989, almost half of *all* hospitals in Maryland lost money on operations. Continued losses will threaten hospitals' ability to carry out their mission.

## Challenges from all directions.

Other developments are also challenging hospitals' financial health and their ability to survive:

- **Inflation**—hospitals face increasing costs for goods and services which have outpaced the rate of inflation in the general economy. This is due to costs of new drugs, new technology and other medical supplies.
- **Technology**—hospitals must keep abreast of the latest changes in every area of the facility. For example, a CT scanner—standard equipment these days, costs over \$750,000. Necessary, but expensive.
- **Personnel shortages**—hospital personnel expenses account for 60% of the average hospital bill. Hospitals must

attract and retain highly skilled, scarce medical professionals.

- **Underinsured**—hospitals treat increasing numbers of people who are underinsured or who have no insurance at all. In the past ten years, the number of uninsured Americans has *risen* 25% and is likely to increase as the economy moves from a manufacturing to a service base, since small service firms often provide little or no health insurance.
- **Increased intensity**—while reimbursement for services is being limited, the intensity of care provided for each patient is rising. Patients hospitalized today are more sick and require more tests and procedures in a shorter period of time than ever before.

## Business strategies protect hospitals' social mission.

Hospital boards, management, physicians, nurses and other medical professionals are all working aggressively to protect both the basic mission *and* the bottom line. They are adapting business strategies to the particularly complex hospital environment. In fact, hospitals are able to provide an uncompromised level of quality care to their patients by:

- **Managing and measuring quality.** No single objective standard exists for measuring the value of treatment. Hospitals, however, are breaking new ground in evaluating and setting standards for measuring quality.
- **Broadening the revenue base.** By offering a wide range of non-traditional hospital-based services such as home nursing and medical equipment, hospitals have developed integrated health care systems which support the bottom line and ensure the availability of health resources to their communities.
- **Setting priorities for investing in new technology.** The decisions made today by hospitals affect the future availability of resources to the community. No longer able to simply purchase every new piece of equipment, hospitals are being forced to evaluate and prioritize new technology.
- **Finding and keeping the best health care professionals.** Recruiting, training and retaining medical professionals

in today's competitive environment is difficult. As the availability of trained professionals decreases, hospitals are finding new solutions and innovations to protect their most important resource.

- **Contributing to the economic viability of their communities.** Hospitals are seen as sources for the health and well-being of individuals, but they're also critical to the economic health of their community. Hospitals provide millions of dollars to the community in salaries and wages, supply purchases, community involvement and health education.

In future articles, we'll explore these efforts by hospitals to provide quality care while remaining financially strong.

Social service or business? As they seek solutions to the challenges of the medical marketplace, hospitals clearly must be both.



For a reprint of this, or any other article in this series, please call 828-GBMC (4262) or write: Community Relations, 6701 North Charles Street, Baltimore, MD 21204.

© Greater Baltimore Medical Center, 1990.



# When you choose Princeton, you're in good company.

"I was looking for a company with good coverage and a good rate, and one that stands behind you when you need them... I found Princeton.

And, Princeton was the only company offering the *Occurrence Plus* coverage I wanted."

---

*Dr. Mayer Katz  
General & vascular surgeon  
Lewes, Delaware*

---

In Maryland and Delaware, only Princeton offers *Occurrence Plus*, an innovative policy with built-in tail coverage.



Princeton Insurance Company  
4 North Park Drive  
Hunt Valley, MD 21030-1812  
301-785-0900

More than  
one thousand  
Maryland and  
Delaware doctors  
have chosen  
Princeton for  
their professional  
liability coverage.  
It's easy to make  
the switch.

Why wait?



W1 MA76M  
NO. 8 1991  
02-----SEQ: SR0054434  
1: MARYLAND MEDICAL JOURNAL

Seminar  
Registration

# MMJ

Maryland Medical Journal  
AUGUST 1991



NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA, MD 20894



NATIONAL  
LIBRARY  
  
AUG 5 1991  
  
OF  
MEDICINE

Annual Report Issue

Endorsed by Med Chi  
for Maryland Physicians

© 1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.

# Our Members Are Not Dying For A Free Tail.

Strangely enough, some companies are trying to sell Maryland physicians a professional liability policy that requires them to die or become permanently disabled in order to get a free tail. At Medical Mutual, our members can get a free tail while they are very much alive.

We make the tail available at no extra cost for those of you who are planning to retire from the practice of medicine after five consecutive years on our claims made and/or occurrence policy. If retirement is not in your plans, our tail is free at any age after 15 consecutive years on our claims made policy. As an added feature, you may step down from a higher rated specialty to a lower rated one with no tail charge for making the change.

Your broker or our Member Services Representatives can answer your questions about tail provisions for Medical Mutual members.

Of course, we also give a free tail in the event of your permanent disability or death.

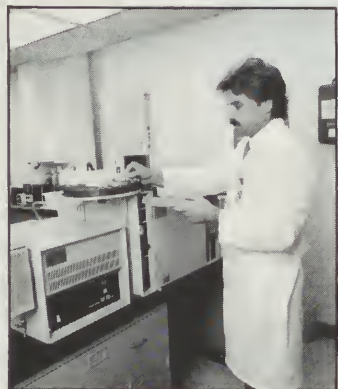
We just don't think this should be your only choice.



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# The Maryland Medical Laboratory Network



## **Quality and Accessibility...**

An industry leader, Maryland Medical Laboratory, Inc. is renowned for its high standards of performance and quality. The advanced technology of Maryland Medical Laboratory, Inc. is available around the clock and easily accessible via an extensive transportation and telecommunication network.

## **Caring with Excellence...**

Maryland Medical Laboratory, Inc. is people serving people. With years of combined laboratory experience, the Maryland Medical Laboratory, Inc. staff of caring Pathologists, medical technologists, and hundreds of administrative and support personnel stand ready to serve you and your patients.

INQUIRIES WELCOME



## **MARYLAND MEDICAL LABORATORY, INC.**

1901 Sulphur Spring Road Baltimore, Maryland 21227  
(301) 247-9100, Maryland 1 (800) 638-1731, U.S. 1 (800) 368-2576

## **THE MARK OF EXCELLENCE**



## Princeton's Maryland Agents

Affiliated Financial Services, Inc.  
Columbia, MD (301) 992-0043

Beall, Garner, Screen & Geare  
Cumberland, MD (301) 722-2500

Harry Cohen Insurance Agency, Inc.  
Baltimore, MD (301) 366-3030

Comprehensive Risk Management  
Timonium, MD (301) 560-2424

Consolidated Insurance  
Baltimore, MD (301) 944-9550

Contemporary Insurance Services  
Washington, D.C. (800) 658-8943  
(202) 887-5563

Corroon & Black, Stump, Harvey, Cook  
Hunt Valley, MD (301) 527-1200  
Bethesda, MD (301) 951-3300

Diversified Insurance Industries  
Baltimore, MD (301) 433-3000

William C. Garrett & Associates  
Towson, MD (800) 458-7295

Hardesty Insurance Services  
Dover, DE (302) 678-9555

The Harjes Agency  
Hunt Valley, MD (301) 785-6161

Ralph W. Lee & Company  
McLean, VA (703) 556-8787

MBS Insurance Services  
Mountain Lakes, NJ (201) 335-2900

Medical Liability Agency, Inc.  
Towson, MD (301) 296-8326

Medical Society of Delaware  
Insurance Services (MSDIS)  
Wilmington, DE (302) 571-0986

Med Net Financial  
Bethesda, MD (301) 961-8861

Onal's Insurance Agency  
Linthicum, MD (301) 859-1990

Reese, Yeatman & Associates, Inc.  
Bethesda, MD (301) 657-9490

Smith, Cropper & Deeley, Inc.  
Willards, MD (301) 835-2000

W.S. Borden Company  
Trenton, NJ (609) 394-5288

Wideman & Co.  
Cherry Hill, NJ (609) 428-0939

Wright-Gardner Insurance, Inc.  
Hagerstown, MD (301) 733-1234

# Making the right choices means asking the right questions.

You know the questions to ask your patients. Questions that will provide the information you need to make an informed decision about medical treatment.

When it comes to choosing a medical malpractice insurer, knowing which questions to ask--and how to interpret the answers--is no less important. Because just as your treatment decisions may have a lasting impact on your patient's long-term health, your choice of insurer may make all the difference to your professional and financial well-being in the years ahead.

In an uncertain medical situation, you might consult a specialist. When you're making decisions about insurance, why not consult with an insurance specialist? An expert who can suggest which

questions to ask, guide you through the technical jargon, and help you select the coverage that's right for you.

That's where Princeton's network of independent insurance agents comes in. Our agents understand the insurance needs of health care professionals. They'll show you how to compare costs and benefits, and help you avoid gaps or duplications in coverage.

Do ask an agent why Princeton should be your choice. Ask about our financial strength, about our claims management philosophy that vigorously defends physicians against meritless claims...and about our new office package policy that offers protection for your practice and premises. We think you'll like the answers.



**Princeton Insurance Company**  
4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900



# MMJ

## Maryland Medical Journal

AUGUST 1991

VOLUME 40 ISSUE NO 8

### MINUTES

Minutes, First Meeting, 193rd Annual Session, House of Delegates (333rd Meeting) . . . . .	653
Minutes, Second Meeting, 193rd Annual Session, House of Delegates (334th Meeting) . . . . .	665

### COMMITTEE REPORTS

AIDS, Committee on . . . . .	671	Medicine and Religion, Committee on . . . . .	696
Alcoholism and Chemical Dependency, Committee on . . . . .	672	Medicolegal Committee . . . . .	696
Bylaws Committee . . . . .	673	Mental Health, Committee on . . . . .	696
Computers in Medicine Committee . . . . .	676	Music Medicine Clearinghouse Committee . . . . .	696
Continuing Medical Education Review Committee . . . . .	677	Nominating Committee . . . . .	698
Committee on Drugs . . . . .	678	Occupational Health Committee . . . . .	699
Emergency Medical Services Committee . . . . .	678	Peer Review Committee . . . . .	699
Finance Committee . . . . .	679	Peer Review Management Committee . . . . .	700
Focused Professional Education Committee . . . . .	680	Physician Licensure Regulations, Ad Hoc Committee on . . . . .	701
Hospital Medical Staffs, Committee on . . . . .	680	Physician/Patient Relations Committee . . . . .	701
Immunizations and Infectious Disease Subcommittee . . . . .	681	Physician Rehabilitation, Committee on . . . . .	702
Laboratory Regulations Subcommittee . . . . .	682	Policy and Planning Committee . . . . .	702
Legislative Committee . . . . .	683	Professional Ethics, Committee on . . . . .	703
Library and History Committee . . . . .	689	Professional Review Organization Monitoring Committee . . . . .	704
Long-Term Care and Geriatrics, Committee on . . . . .	690	Public Health, Committee on . . . . .	705
Managed Care and Third Party Liaison, Committee on . . . . .	690	Public Relations Committee . . . . .	707
Maryland Medical Journal Editorial Board . . . . .	691	Scientific Activity, Committee on . . . . .	709
Maryland Medical Political Action Committee . . . . .	692	Small Area Practice Variation, Committee on . . . . .	710
Maternal Welfare Subcommittee . . . . .	693	Specialist Identification, Committee on . . . . .	710
Medical Assistance Program, Liaison Committee with the . . . . .	693	Specialty Societies, Committee on . . . . .	711
Medical Radiation Technologist Regulations, Subcommittee on . . . . .	695	Therapeutic and Formulary Committee, Ad Hoc . . . . .	712
		Women in Medicine Ad Hoc Committee . . . . .	712
		Young Physicians, Committee on . . . . .	713

1211 Cathedral Street  
Baltimore, MD 21201  
301 539-0872

**Editor**

Victor R. Hrehorovich MD

**Associate Editor**

Henry P. Laughlin MD, ScD, ScSD

**Managing Editor**

Janet Campbell MS, MS

**Editorial Board**

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

Carmine M. Valente PhD (Advisory)

**Art Director**

Virginia Carter

**Graphic Artist**

Valentia McVey

**Communications Assistant**

Lori Robinson

**Executive Director**

Angelo J. Troisi FACHE

**Communications Director**

Michelle Burke MHSA

Copyright © 1991. MMJ Vol 40, No 8. The Maryland Medical Journal USPS 332080. ISSN 0025-4363 is published monthly by the Medical and Chirurgical Faculty of Maryland and is a membership benefit. Subscription rates: U.S. and U.S. possessions, one year: nonmembers \$35; foreign \$42. Single copy: members \$5; nonmembers \$7. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: send address changes to Maryland Medical Journal. 1211 Cathedral St., Baltimore, MD 21201-5585. FAX 301-547-0915.

**Advertisers**

Contact: Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.

## SUPPLEMENTAL REPORTS

AMA-ERF Report	717
Auxiliary Report	717
Executive Director's Report	718
House of Delegates Report,	
1990 Interim Meeting of the AMA House of Delegates	721
Med Chi Insurance Fund Report	726
Resident Component Society Report	727
Student Component Society Report	727
Treasurer's Report	727
1991 Budget	734

## DEPARTMENTS

Epidemiology and Disease Control Program	627
Communicable Diseases...	
Executive Director's Newsletter	635
Quality Practice Digest	643
DEMPAQ...	
Maryland Oncology Newsletter	647
Liver Tumors...	
A Clinical Moment With ... Diabetes	649
Education...	

## MISCELLANY

Semiannual Meeting	642
Members in the News	737
Outstanding Committee Chairpersons, Photo Contest, Award for Excellence...	
Wyeth-Ayerst Award	738
Donald T. Lewers MD...	
Medical Miscellany	739
Partnership Against Drugs...	
Council Highlights	740
Doctors Note	741
Physician's Recognition Award	743
Classified Ads	745

Cover: The artifacts displayed on the cover are from Med Chi's History of Medicine Collection. This unique and impressive collection consists of books, journals, manuscripts, medical instruments, photographs and prints.

Cover photo and design by Virginia Carter.



Medical  
and Chirurgical Faculty  
of Maryland





# TOWSON IMAGING CENTER



## OPENING THIS MONTH!

*(A Local Physician Partnership)*

A FULL SERVICE DIAGNOSTIC CENTER OFFERING STATE-OF-THE-ART EQUIPMENT:

**MRI — G.E. 1.5T Signa Advantage high field strength magnet with  
MR — Angiography**

High resolution images of head, body and musculo-skeletal system.

**CT — G.E. Pace Plus**

Head and whole body imaging.

### RADIOGRAPHY

- Now taking appointments
- Same Day scheduling
- Same day reporting
- Physician consultation with radiologist available
- Duplicate films provided

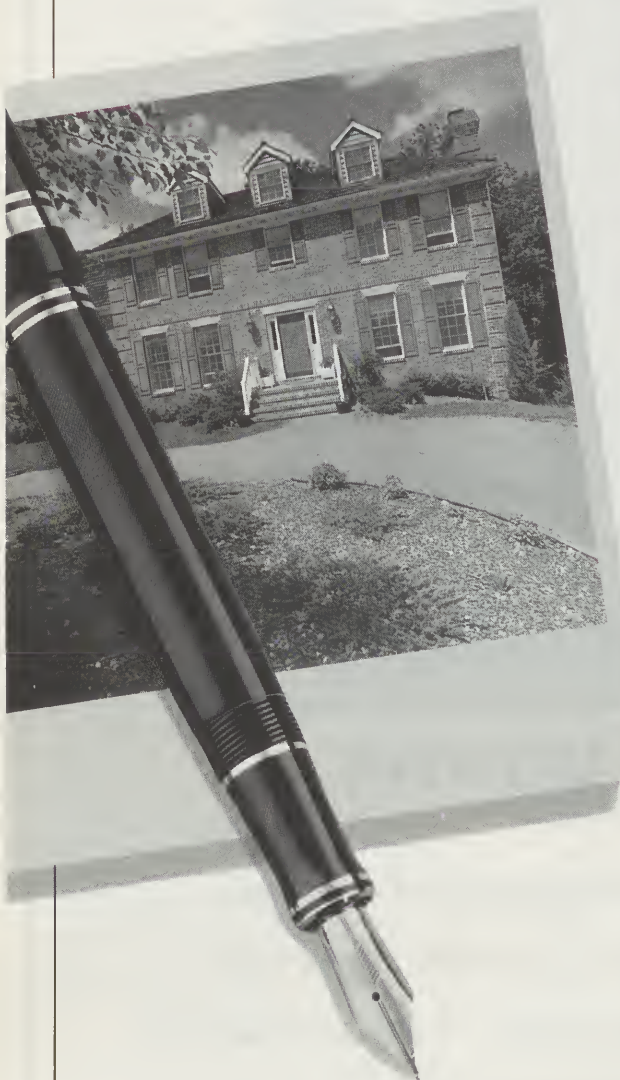


**TOWSON  
IMAGING  
CENTER**

1304 Bellona Avenue  
Lutherville, MD 21093  
Phone: (301) 825-3500  
FAX: (301) 825-3509

***Quality Service to Our Physicians and Patients!***

# JUMBO MORTGAGE CLIENTS PREFER CHASE.



**WHY?** Because Chase Professional Banking offers the flexibility, financing options, and service designed to meet the needs of the busy executive or professional.

- ✓ **Large loan amounts.** Loans for purchase or refinance from \$250,000 to \$1,000,000 or more help you maximize your buying power.
- ✓ **Competitive rates and low closing costs.** Chase does not require tax or insurance escrows, or private mortgage insurance. This can substantially reduce your initial expenses. Zero-point quotes are available.
- ✓ **Fast response.** Chase professional bankers guarantee a timely response to your loan request.
- ✓ **Exceptional service.** All mortgages remain in our portfolio, ensuring superior service over the life of the loan.

Chase Professional Banking also offers:

- A variety of high-yield deposit products.
- Home equity lines of credit up to 95% of the value of your home.
- Unsecured lines of credit up to \$50,000.
- Luxury auto loans with terms up to 7 years.
- Marine loans up to \$250,000.

Chase Professional Banking is the choice for executives and professionals. Our resources and services are at your disposal--at your convenience.



Chase Bank of Maryland is a subsidiary of the  
Chase Manhattan Corporation.  
Member FDIC

## 301-347-0905







# At the SurgiCenter, we've found a way to relieve the most common discomfort of all.

Tired of the paperwork and red tape most hospitals put you through?

Then consider operating out of the SurgiCenter of Baltimore.

Thanks to the latest in state-of-the-art medical equipment, a supporting staff of the area's most caring and capable nurses and technicians, and a comfortable, intimate setting, we're able to fully meet your same-day surgical needs.

Without causing you or your patients any undue stress or discomfort.

And unlike high-traffic hospitals, we're committed to one thing

and one thing only — outpatient surgery. So we can operate more efficiently, and with less overhead. A point your patients are sure to appreciate come billing time.

We're also easy to get to. And we'll bend over backwards to make sure you have a room when you need it.

Plus, we have agreements with all the major insurance carriers and HMO's in the state.

So drop by for a tour. Any time. Or call 356-0300 for more information.

Find out why nearly 100 of the area's finest physicians and

surgeons are operating at the SurgiCenter of Baltimore.

And turn what used to be a complex and painful procedure into a breeze.

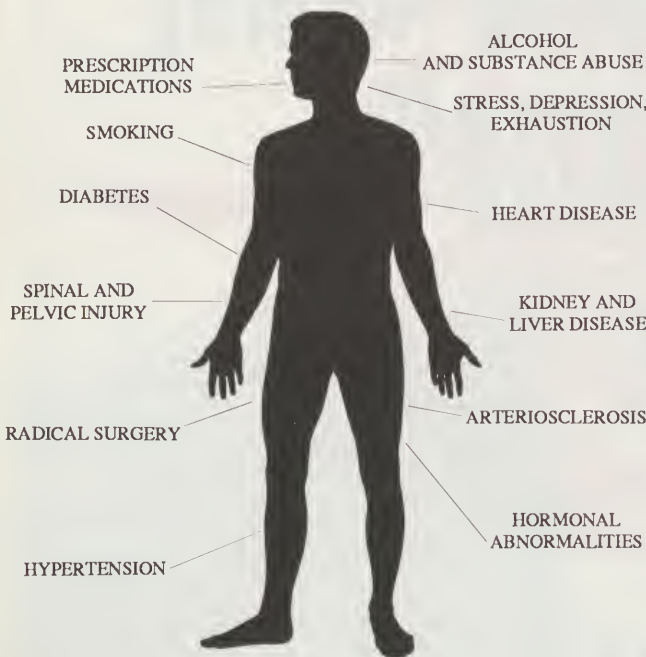
THE  
**SurgiCenter**  
OF BALTIMORE

McDonough Crossroads  
23 Crossroads Drive  
Owings Mills, Maryland 21117  
(301) 356-0300

A joint venture of Health Specialists P.A. and Sinai Hospital

Medicare and AAAHC Accredited

# Impotence: Whatever The Cause...



## We Have The Treatment.

- Counseling
- Drug-Injection Therapy
- Mechanical Devices
- Medications
- Prosthesis
- Revascularization

Maryland's first health center dedicated solely to the comprehensive diagnosis and treatment of impotence. Physicians and patients now have an answer.



1104 Kenilworth Drive • Suite 406  
Baltimore, MD 21204

**1-301-296-MRIC**  
**1-800-955-MRIC**

## THE MAGNIFICENT SEVEN ARE AT YOUR SERVICE.



**T**he seven PSA Financial affiliated companies are specialists, each in its own sphere of operation. Individually and in combination, they provide financial services, risk management and investment counseling to the medical profession, and over the years have gained recognition as outstanding performers in their several fields.

Contact any of our affiliates to enjoy the satisfaction and sense of security that comes from having probably the best financial service specialists in the business on your side.

Planning for our  
Clients Financial Future  
Since 1928.



**PSA Financial Center**  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

**PSA Professional Liability, Inc.**  
*Malpractice Insurance*

**PSA Financial, Inc.**  
*Employee Benefits*

**PSA Financial Advisors, Inc.**  
*Financial Planning*

**PSA Capital Management, Inc.**  
*Investment Management*

**PSA Pension Services, Inc.**  
*Design & Administration*

**PSA Insurance, Inc.**  
*Agents & Brokers*

**PSA Equities, Inc.**  
*Broker / Dealer*

## When you can buy any home, here's why you'll choose a Villager.



**1.** Villager offers the finest homesite locations—in Green Spring Valley communities as well as Worthington Park and the Falls Road corridor. We'll also build your home on your lot... with our plans or yours.

**2.** Breathtaking estate-size home designs, and the reputation for using the very finest materials and craftsmen.

**3.** The opportunity to work one on one with our designers. We'll custom build from your designs or from ours. Our new 1991 designs include the Euro Classic I Award of Excellence recipient from the Homebuilders Association of Maryland and the next generation of our Euro Classic series. Call now. We're building just a few homes for 1991, from \$290,000 to over \$700,000. Phone Sandy Marenberg or Karen Pine for a personal consultation.

**Ruxton—Knollcrest Farms at Hillstead and Huntspring  
Pikesville—Helmsley Court Owings Mills—Worthington Park  
Anton North II—Merry Hill Court Worthington Valley—Dorset Hills**



**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

**Brokers  
Protected**

McDonogh Crossroads Office Park  
20 Crossroads Drive, Suite 113 • Owings Mills, MD 21117  
Phone: (day) 363-0963 (evening) 602-0820



# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

August, 1991

## SELECTED COMMUNICABLE DISEASES IN MARYLAND IN 1990

(Continued)

### HAEMOPHILUS INFLUENZAE

#### DISEASE (57)

1.2/100.000 (U.S. Not Available)

A decline of *H. influenzae* disease by 22% from 1989 and by 53% from 1988 was noted in 1990 (Figure 3). Table 1 (see July, 1991 issue) shows the number of cases by county. More than 40% of the cases were reported from Prince George's (16) and Montgomery (7) coun-

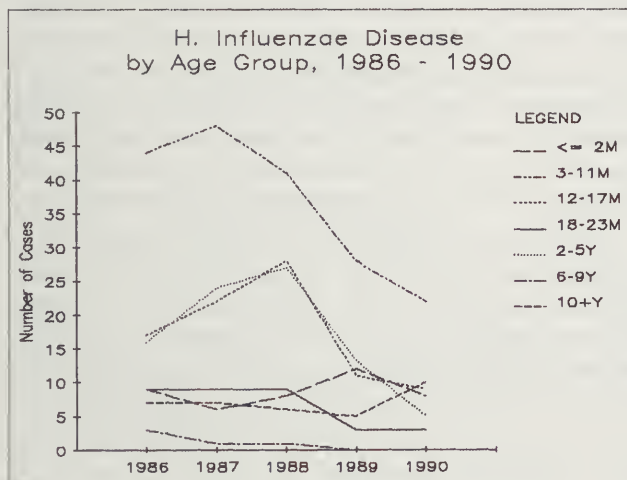


Figure 3

ties. More illness occurred during the first part of the year; the peak month was April (11 cases). The male to female ratio was 0.7:1.0. The ratio of whites to blacks was 1.9:1.0; one patient was Hispanic.

The number of cases by age group from 1986 to 1990 is presented in Figure 3. Over the past 4 years there has been a large decrease in the age group between 3 month and 15 months, even though no vaccine was licensed for these children. Forty-seven (82.5%) of the cases in 1990 were less than 6 years of age, including 6 newborns. As expected, 0 through 4 year old children had the highest age-specific incidence rate for 100,000 population (14.0

overall; 11.1 for males, and 17.0 for females). Of the 8 (14.0%) cases in 1990 who were eligible for Hib vaccination (18 months to 5 years of age), 6 had not been immunized, one 2 year old child had been vaccinated at approximately 17 months of age, and 1 had unknown vaccination status.

Information on ampicillin resistance of *H. influenzae* isolates from 30 patients showed that 57.0% were resistant to ampicillin, compared to 33.8% (68 isolates tested) in 1985 and 15.4% (39 tested) in 1981.

The type of illness caused by *H. influenzae* disease included meningitis (58.9%), bacteremia (26.1%), pneumonia (7.1%), conjunctivitis (3.6%), and epiglottitis 1.8%. Five cases are known to have died (for a case fatality of 8.8%), 44 survived, and the outcome for 8 patients was unknown. Use of the recently licensed Hib vaccines for infants beginning at 2 months of age should lead to further decreases in Hib disease.

### HEPATITIS A (866)

18.1/100,000 (U.S. 11.4/100,000)

The trend of hepatitis A from 1980 to 1990 is illustrated in Figure 4. In 1990 there was a 28% decline from 1989. Decrease was observed in every jurisdiction,

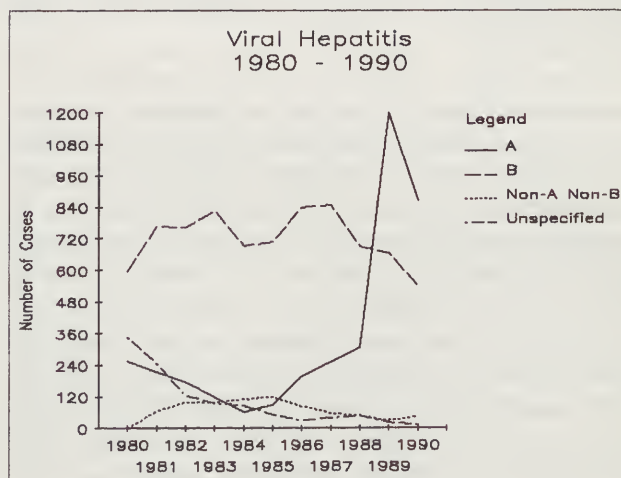


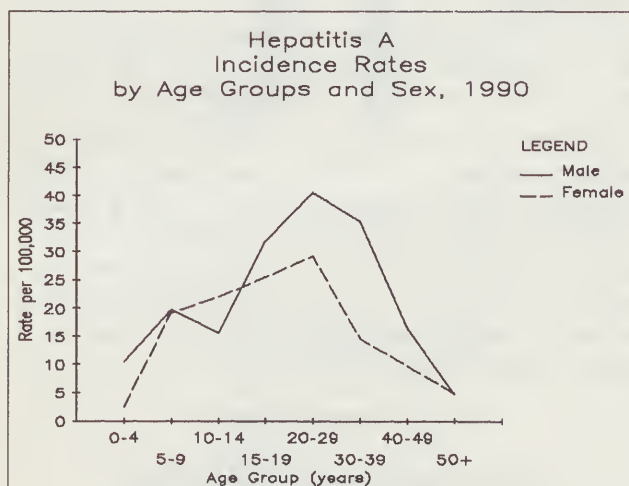
Figure 4

including the metropolitan Baltimore area (Baltimore City, Baltimore County and Anne Arundel County) (Figure 6), and Frederick County, all of which experienced outbreaks of hepatitis A in 1989 (Table 3). In 1990 the Baltimore metropolitan area contributed 88.3% of all cases in the State. The number of cases by county is shown in Table 1 (see July, 1991 issue).

**Table 3. Hepatitis A Cases and Incidence Rates in the Baltimore Metropolitan area and Frederick County, 1989-1990**

Jurisdiction	1989		1990	
	Cases	Rate per 100,000	Cases	Rate per 100,000
Anne Arundel	140	32.7	49	13.1
Baltimore City	626	84.0	554	75.3
Baltimore County	226	32.9	155	22.4
Frederick	58	40.5	4	2.7

More than 63% of the 846 cases with known onset of illness occurred in January through May. The peak (130 cases) was in January; thereafter, a slow decline during each consecutive month brought the cases down to 23 in December.



**Figure 5**

The male to female ratio was 1.5:1.0. The ratio of whites to blacks was 1.5:1.0; 6 cases were Hispanic, 1 Asian, 6 other race, and the race of 208 (24.0%) cases was not specified.

Age- and sex-specific rates per 100,000 population are presented in Figure 5. The highest incidence rates occurred in males and females 20 to 29 years of age, (40.4 and 29.2 respectively). Among the cases with known sex and race in age group 15 to 39 years (566), the rate in non-white males (42.4) was 1.6 times higher than the rate in white males (26.3); the rate in non-white females (32.8) was twice as high as the rate in white females.

Of the 237 adult patients with known occupation, (excluding retired, unemployed, homemakers, etc.), 21 (8.5%) were health care providers, 20 (8.1%) were foodhandlers, 3 (1.4%) were day care facility employees. Of the 345 cases with known workplace, school, day care

facility, etc., 21 (6.1%) were working in foodhandling businesses, 20 (5.8%) worked in hospital or institutions for the disabled, 11 (3.2%) in day care facilities, kindergarten, etc.

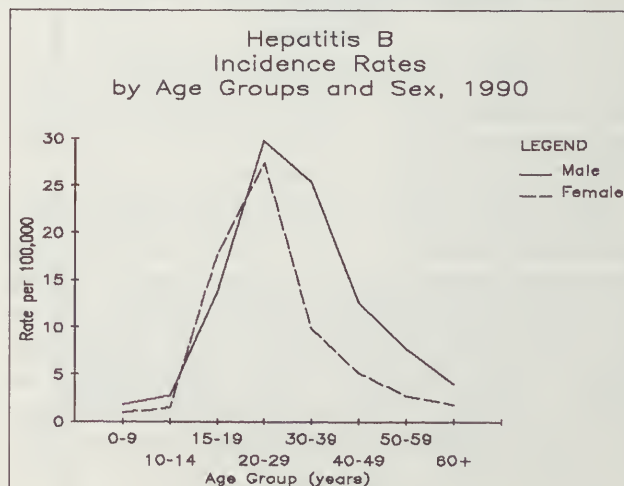
A known or suspected source of infection was reported for only 173 (20.0%) of the cases. Of these, 88 (51.0%) had contact with a confirmed or suspected hepatitis A case, 31 (17.9%) used illegal drugs, (compared to 22.7% in 1989 and 13.0% in 1988), 15 (8.8%) had consumed potentially contaminated food, 10 (5.8%) were refugees/immigrants, 9 (5.2%) were employees or children in nursery, day care or pre-school facility, or had contact with such and 20 (12%) had other exposure. In a more detailed study conducted in Baltimore City, of 343 patients interviewed, 105 (43.2%) of 242 adults with hepatitis A admitted use of illegal drugs, and 105 of 343 adults and children (30.6%) indicated contact with a case of hepatitis A, 41 (12.0%) had contact with a child under 2 years of age, and 68 (19.8%) did not indicate any risk factors.

## HEPATITIS B (545)

**11.4/100 (U.S. 7.9/100,000)**

Hepatitis B has been declining since 1987 (Figure 4) and in 1990 was at its lowest level in 10 years. The number of cases by county is shown in Table 1 (see July, 1991 issue). The most noticeable decline in numbers and incidence rates per 100,000 population was observed in Baltimore City (from 39.5 in 1989 to 26.1 in 1990), Harford county (from 22.7 to 10.4), and Cecil County (from 21.4 to 15.4). Slight increases of hepatitis B rates occurred in Montgomery and Prince George's counties.

The only seasonal difference in onset of illness was a slight preponderance in the summer months. The male to female ratio was 1.5:1.0. The incidence rate in males was 14.5/100,000; in females 9.0/100,000. The rates per 100,000 population by age group and sex are presented in Figure 6. The highest rates were observed in males (29.7) and females (27.4) 20 to 29 years of age. The ratio of whites to nonwhites was 1.1:1.0, the race of 73



**Figure 6**



individuals was not known. The incidence rates per 100,000 population in nonwhites was 2.6 times higher than the rate in whites. The highest rate was observed among non-white males (21.1), followed by the rates in nonwhite females (15.8), white males (9.0) and white females (5.3).

Information on exposure during the 6 months prior to onset of illness and the probable source of infection was available for only 168 (31.1%) cases. Of these, 52 (31.0%) admitted drug use (a decrease from 46.5% in 1989 and 40.9% in 1988), 45 (26.8%) had contact with confirmed or suspected hepatitis B case, 45 (26.8%) had hetero- and unspecified sexual exposure, 9 (5.4%) -blood transfusion, 3 (1.8%) - homosexual exposure, 3 (1.5%) - needle stick, 1 (0.6%) - percutaneous exposure, other than I.V. drug use, tattoo, etc., 1 (0.6%) -perinatal exposure, 1 (0.6%) -dental work, 1 (0.6%) -human bite, and 6 (4.5%) - other exposure.

## HEPATITIS NON A - NON B (C) (45)

0.9/100,000 (U.S. 1.1/100,000)

The trend of nonA-nonB (C) hepatitis from 1980 to 1990 is illustrated in Figure 4. The decline which started in 1985 reversed in 1990 into an increase of 60.7% from 1989, when 28 cases were reported. The introduction in May, 1990, of a screening test for detection of antibodies to hepatitis C, initially used in blood donor centers, might have helped diagnose cases that otherwise would have been classified as unspecified hepatitis or remained unrecognized or unreported. Many persons with positive hepatitis C test results were investigated, examined, and, after excluding acute hepatitis A and B, were found to meet the CDC case definition of nonA-nonB hepatitis. The number of reported cases by county is shown in Table 1 (see July, 1991 issue). Even though Baltimore County was leading with eleven cases, the highest incidence rate was noted in Wicomico County (5 cases; 6.7/100,000). Cases occurred throughout the year; no seasonal pattern was observed.

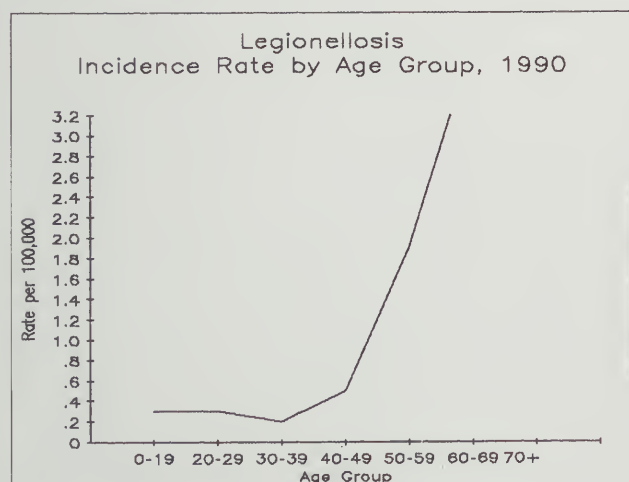


Figure 7

The male to female ratio was 1.4:1.0; the ratio of whites to blacks was 4.3:1.0. Males, 30 to 39 years old (12 cases) had the highest incidence rate (3.1/100,000).

Suspected source of infection during the 6 months prior to the onset of illness was reported for only 10 of the cases (22.2%): 5 were illegal drug users, 2 had received blood or blood products by transfusion, 2 had sexual contact with cases of nonA-nonB hepatitis, and 1 had been exposed to a nonA-nonB case.

## LEGIONELLOSIS (48)

1.0/100,000 (U.S. 0.5/100,000)

Legionellosis was reported throughout the year from 14 jurisdictions. The number of cases by county is shown in Table 2 (see July, 1991 issue). The incidence rate in Washington County (13.2/100,000), the highest in Maryland, was due to an outbreak during the first part of 1990. The male to female ratio was 1.1:1.0.

Ages ranged from 11 to 90 years (mean 61.4, median 67 years). The incidence rate by age group is shown in Figure 7. While incidence rates per 100,000 for males and females were similar (1.1 and 1.0, respectively), age-specific incidence rates of persons older than 59 years of age (the most affected age group) were 5.4 for males and 3.7 per 100,000 for females. The ratio of whites to non-whites among the 39 persons with known race was 6.8:1.0.

Information on underlying medical conditions at the time of onset of legionellosis was available for 23 patients: 5 were undergoing systemic corticosteroid treatment, 4 had diabetes mellitus, 1 had cancer, 7 were smokers (>10 cigarettes/day), and six did not indicate underlying illness. There were 4 deaths; 35 survived and the outcome for 9 was unknown.

## LYME DISEASE (238)

5.0/100,000 (U.S. Not Available)

A case of Lyme disease in Maryland is defined as any person with erythema migrans (at least 5 cm in diameter) diagnosed by a physician, or any patient with at least one late manifestation (rheumatologic, neurologic, or cardiac) and laboratory confirmation of infection (CDC. Lyme Disease National Surveillance Case Definition, July 1990). It should be emphasized that this case definition is intended for surveillance and reporting purposes only. Decisions regarding treatment should be based on a clinical assessment.) The laboratory confirmation may include isolation of the spirochete, *Borrelia burgdorferi*, from tissue or body fluid, detection of IgG or IgM antibodies to *B. burgdorferi* in serum or CSF, or detection of significant change in antibody levels in paired acute and convalescent serum

samples. The trend of Lyme disease in Maryland from 1986 to 1990 is shown in Figure 8.

In 1990 every county, except Garrett and Somerset reported Lyme disease; 15 counties contributed to the overall increase of almost 70 percent from 1989. The number of reported cases and the incidence rates per 100,000 by county in 1989 and 1990 is shown in Table 4.

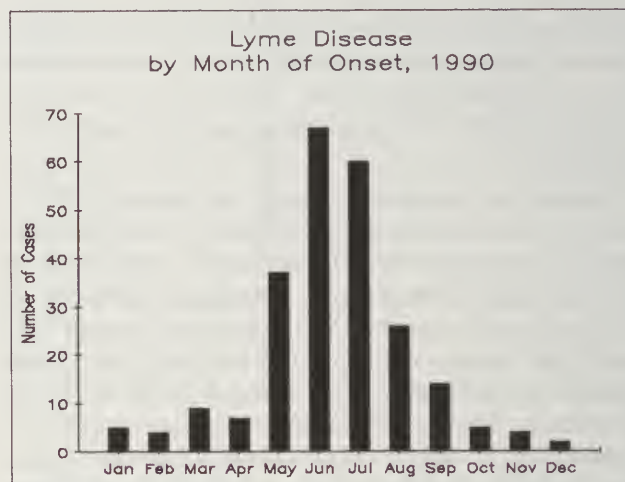
**Table 4. Lyme Disease Cases and Incidence Rates by County, 1989-1990**

Jurisdiction	1989		1990	
	Cases	Rate per 100,000	Cases	Rate per 100,000
Allegany	0	0.0	1	1.3
Anne Arundel	15	3.5	27	6.3
Baltimore	21	3.1	39	5.6
Calvert	9	18.4	71	3.6
Caroline	2	8.1	3	11.1
Cecil	7	10.0	15	21.0
Charles	14	14.0	23	22.7
Dorchester	3	10.0	1	3.3
Frederick	3	2.1	3	2.0
Garrett	0	0.0	0	0.0
Harford	4	2.4	27	14.8
Howard	3	1.7	10	5.3
Kent	11	64.7	9	50.4
Montgomery	15	2.1	13	1.7
Prince George's	8	1.1	10	1.4
Queen Anne's	11	33.0	10	29.5
St. Mary's	3	4.2	5	6.6
Somerset	0	0.0	0	0.0
Talbot	2	6.9	1	3.3
Washington	1	0.9	3	2.5
Wicomico	2	2.7	6	8.1
Worcester	2	2.7	6	8.1
Baltimore City	6	0.8	12	1.6
Maryland Total	143	3.1	238	5.0

Eighty-four percent of the cases had onset of illness in May through September; the peak incidence was in June (67 cases) and July (60) (Figure 9).

The male to female ratio was 1.1:1.0; 206 (85.1%) were white, 13 (5.4%) black, 3 (1.2%) other race, and the race of 20 (8.3%) was not known. Ages ranged from 1 to 83 years (median 30 years). The highest age-specific incidence rates per 100,000 were noted in males, 5-9 years old (12.9), 10 to 14 years old (8.8), and 50 to 59 years old (8.7), and females, 60 to 69 (9.0).

Information about symptoms was available in over 95% of the cases. Of these, 179 (75.5%) had erythema



**Figure 9**

migrans, 62 (26%) had arthritis and 88 (37.9%) had arthralgia. Neurological symptoms were present in 22 cases (9.4%): Bell's palsy in 10, carpal tunnel syndrome in 5, meningitis in 1, and miscellaneous neuropathies in the remainder. Cardiac symptoms were uncommon, only occurring in 6 patients (2.6%): 5 had palpitations and one had an unspecified EKG abnormality.

Less than 10% of the patients required hospitalization. Definite tick bite prior to onset of illness was reported by 93 of 230 (40.4%) responding to the question. In most cases, the county where exposure was reported to have occurred was the same as the county of residence.

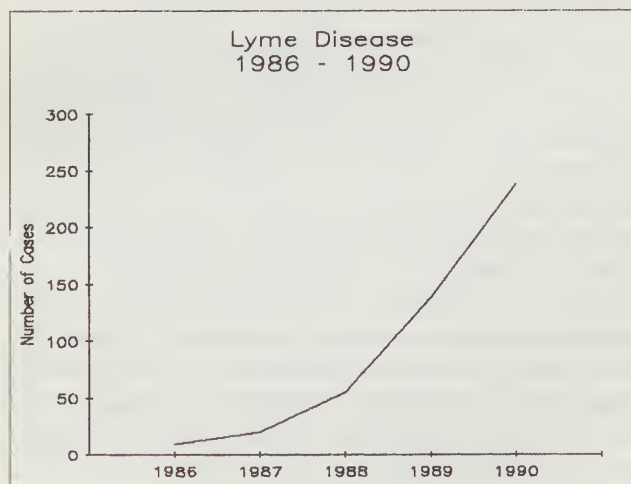
## MALARIA (57)

**1.2/100,000 (U.S. 0.5/100,000)**

The number of cases by county is shown in Table 1 (see July, 1991 issue). Montgomery and Prince George's counties reported 78.9% of all cases in 1990. Ages of patients ranged from 2 to 85 years (median 32 years); almost 65% were 20 through 45 years of age. Twenty-eight were black, 10 Asian, 6 Hispanic, 5 white, and 8 were of unknown race. The male to female ratio was 1.8:1.0. Of those with known status (34 individuals), 28 (82.4%) were refugees or recent immigrants to the U.S.

The type of malaria was as follows: *Plasmodium falciparum* (22), *P. vivax* (13), *P. ovale* (2), *P. malariae* (2), and unspecified (18). Malaria was acquired in Africa (33 cases, including 18 in Nigeria), Asia (10, including 7 in India and Vietnam) and Central (5) and South (1) America; the country of exposure for 8 patients was not specified. In general, *P. falciparum* malaria was contracted most often in Africa (19 cases) and *P. vivax* malaria in Asia and Central America. No data on chloroquine resistance of *P. falciparum* were available.

**To be concluded in September, 1991.**



**Figure 8**



# A BRIGHT IDEA TO START WITH...



**180mg**  
**Calan<sup>®</sup> SR**  
(verapamil HCl) 180 mg  
SUSTAINED-RELEASE CAPLETS

Address medical inquiries to:  
G.D. Searle & Co.  
Medical & Scientific  
Information Department  
4901 Seeds Parkway  
Skokie, IL 60077

**SEARLE**

G.D. Searle & Co.  
Box 5110, Chicago, IL 60669

# Commitment and Service Since 1975

The *Med Chi Agency* was established by the Medical and Surgical Faculty in 1975 and now has over 5,000 physicians and employees as clients.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial products. You will benefit from the many coverages available for both your professional and personal needs. You will also benefit indirectly, because Med Chi owns the *Med Chi Agency* and the earnings from its operations.

For complete information about any insurance product or service, just give us a call. We can provide the answers you seek and the solutions you need.



## **THE MED CHI AGENCY**

1204 Maryland Avenue  
Baltimore, MD 21201  
301-539-6642 Toll Free-1-800-543-1262  
FAX-1-301-752-5421



**IF YOU EVER  
SHOT DRUGS GET  
TESTED BEFORE  
YOU GET PREGNANT.**

**DON'T MAKE THEM  
THE AIDS GENERATION.**



Almost all babies with AIDS have mommas who shoot up or who sleep with men who have shot up. Babies with AIDS can't live very long.

If you or your partner ever shot drugs, even if it was only once, you probably shared needles or works.

Many drug users have gotten AIDS that way and passed it on to their babies.

If you want a baby, you and your sex partner should have the AIDS test first, before you get pregnant. Until then, help protect yourself and your partner from AIDS by using condoms.

Protect your baby. Get into treatment. The sooner you stop shooting drugs the safer you and your baby will be.

**STOP SHOOTING UP AIDS.**  
GET INTO DRUG TREATMENT.  
**CALL 1-800 662 HELP.**

A Public Service of the National Institute on Drug Abuse, Department of Health and Human Services.

# You Will Affect the Future of Medicine



## The Medical Manager<sup>®</sup> can affect the future of your practice.

The nation's #1 selling software (more than 10,000 systems installed nationwide) helps you in numerous ways.

- ◆ Filing claims electronically means you get payment faster.
- ◆ Increases staff efficiency.
- ◆ You have automated recall notices.
- ◆ Patient demographic data can help your practice grow.

The Medical Manager<sup>®</sup> is available for as little as \$250. per month on a lease/purchase option.

Call and we'll come to your office, review your needs, and prepare purchase and lease estimates with NO OBLIGATION. Once we install The Medical Manager<sup>®</sup>, we'll train your staff and provide *on-going support* when you need it.

**CALL TOLL FREE**  
**1 (800) 776-2454**



Baltimore, MD  
(301) 494-0992

Fairfax, VA  
(703) 359-0777

Richmond, VA  
(804) 330-9225

Winchester, VA  
(703) 662-4545

The Medical Manager<sup>®</sup> is marketed nationally by Systems Plus, Inc., a California corporation. Systems Plus, Inc., is a registered trademark of Systems Plus, Inc. The Medical Manager<sup>®</sup> is a registered trademark of Personalized Programming, Inc.



# *Executive Director's Newsletter*

August 1991

---

## *1991 Semiannual Meeting*

---

Mark your calendars! Med Chi's Semiannual Meeting will be held September 13, 14 and 15 at the Carousel Hotel and Resort in Ocean City, Maryland. In addition to continuing medical education credits and exhibitors, attendees will have an opportunity to express their opinions during discussions on policies governing the future of medicine including:

- Radiation technologist regulations,
- Mammography screening, and
- AIDS and HIV testing of physicians.

The Med Chi Council will convene on Friday, September 13, 1991 at 3:00 pm. The House of Delegates will meet on Saturday, September 14, 1991 at 1:00 pm.

U.S. Surgeon General Antonia Novella MD and AMA Trustee Robert McAfee MD are featured guest speakers. Families wishing to visit Ocean City are strongly encouraged to attend this year's meeting which will feature special events and activities for spouses and children.

For hotel reservations, call 1-800-641-0011. For registration and meeting information, call 1-301-539-0872 or 1-800-492-1056. For registration forms, see the "Meet at the Beach" ad on page 642 of this *MMJ*.

---

## *Medical Assistance Provider Fee Project Update*

---

Med Chi has received many inquiries about the Maryland Medical Assistance Program's new Provider Fee Project (PFP). A letter explaining this project was mailed in July to physicians participating in the Medical Assistance Program. On June 13, 1991, Med Chi's Executive Committee met with Nelson Sabatini, Secretary to the Department of Health and Mental Hygiene (DHMH), who indicated he would be willing to appear before any component medical society to present information about the PFP and to answer questions from physicians about this project. If you are interested in such a meeting, please contact Roseanne M. Matricciani, Assistant Executive Director for Healthcare Policy, at 301-539-0872 or 1-800-492-1056.

The Executive Committee also helped resolve two critical issues pertaining to this project. The first issue concerned the new PFP billing form received by physicians. Many physicians complained that the form was confusing and their billing clerks/accountants could not discern the amount of money to be posted to each patient's record. During the Executive Committee meeting, Mr. Sabatini assured Med Chi that the billing form would be clarified to ease financial recordkeeping.

The second issue dealt with the reporting of the increase in allowable income on a physician's 1099 report of income caused by the PFP. Many physicians are concerned that reporting this increase would be inappropriate because they do not actually receive the increase in allowable income under the PFP. Med Chi's Executive Committee related this concern to Mr. Sabatini who stated he would seek a ruling from the Internal Revenue Service.

If you have other concerns about the PFP which you would like Med Chi to address, contact Roseanne M. Matricciani, Assistant Executive Director for Healthcare Policy, at 301-539-0872 or 1-800-492-1056.

---

## *Protocol for Physicians with HIV*

---

Med Chi physicians wishing to comment on a practice protocol for physicians with HIV may attend the next meeting of the Committee on AIDS to be held Tuesday, August 6, 1991 at 4:30 pm in the Med Chi Faculty Building. If you are interested in attending this meeting, contact Betsy Newman, Public Relations Director, at 301-539-0872 or 1-800-492-1056.

---

## Medicare Historical Payments

---

In a continued effort to improve communication with physicians regarding the new Medicare regulations, Maurice Hartman, Regional Administrator for the Health Care Financing Administration (HCFA), has developed the following:

### *Transition to the Physician Fee Schedule*

When the ball drops in Times Square announcing 1992, a new system for reimbursing physicians for their care of Medicare patients will go into effect. A Medicare fee schedule will be established and the same payment amount will be made for the same procedure to each physician billing in the same geographic locality. A doctor's specialty will not impact on the amount of reimbursement.

However, while the fee schedule amounts will be uniform for each procedure, Congress required that the fee schedule be phased-in over several years to lessen the immediate impact on some physicians. This phase-in is required in situations where there are significant variations between what is currently being paid for a procedure, what is known as the historical payment, and what would be paid under the fee schedule.

In situations where the historical payment varies from the fee schedule amount by at least 15 percent, either above or below, a blended payment will be made in 1992 and an updated blended payment will be made thereafter. If it varies by less than 15 percent, then the fee schedule amount will be paid.

Some examples may help illustrate this situation:

- (a) The historical payment in a locality for procedure 99999 is \$80. The Medicare fee schedule amount is \$100. Since the difference is 20 percent, a blended payment amount will be used in 1992. The payment would be the sum of the historical payment (\$80) plus 15 percent of the fee schedule amount ( $\$100 \times 15$  percent or \$15). Thus, the payment amount for that procedure in 1992 would be \$95 ( $\$80 + \$15$ ).
- (b) In another locality, the historical payment for procedure 99999 is \$90. Since the Medicare fee schedule amount is \$100, the difference is less than 15 percent. Therefore, in that locality the fee schedule amount of \$100 will be paid for services performed on or after January 1, 1992.

The historical payment is a calculation that represents the average allowed amount in a locality for each procedure. Obviously, the calculation of this amount is critical to the implementation of the physician fee schedule and the determination of whether a transition payment will be made for a given procedure. Your Medicare carrier will be making this calculation this summer and using it as a comparison this fall when HCFA publishes the final fee schedule relative value units and conversion factor in October. Each individual physician will be notified in late November of the payment rates for pertinent procedures which will go into effect in 1992.

---

## Licensure Renewal and Continuing Medical Education Credits

---

The Board of Physician Quality Assurance (BPQA) mailed out licensure renewal forms on or about June 30, 1991 for physicians with last names beginning M-Z. The packets included the standard Part A and a new Part B. Both forms are to be completed and returned to the BPQA by September 30, 1991.

The Maryland Office of the Attorney General recently sent a letter to Med Chi outlining the following options for physicians who submit licensure renewal applications with insufficient continuing medical education (CME) credits:

1. The physician can withdraw the application and resubmit before September 30, 1991, after completing the necessary continuing education courses; or
2. The physician can apply for a waiver of CME credits. However, the BPQA only grants waivers in cases of extreme hardship. In conformity with H.O. § 14-316, extreme hardship is found only in those cases where the enforcement of CME requirements "would so reduce the number of physicians in a community as to jeopardize the availability of adequate medical care in



that community." To request a waiver, the physician must submit a detailed written explanation as to how failure to renew the license would cause hardship to the community; or

3. The physician can apply for an inactive license under H.O. § 14-320. The application for inactive status must be received by September 30, 1991. Under inactive status, the physician CANNOT PRACTICE MEDICINE AND CANNOT PRESCRIBE. When the physician has enough CME credits, the physician can apply for reinstatement of his/her license; or
4. The physician can simply let the license lapse by not submitting an application. The physician can then apply for late renewal or reinstatement by submitting the requisite amounts of CME, depending on how much time has elapsed; or
5. The physician can accept a public order whereby his/her license is suspended and the suspension stayed, effective on October 1, 1991, for ninety days while the physician completes the CME credits. During this time the physician can practice medicine.

For questions regarding options for physicians with insufficient CME credits to request for licensure, contact the BPQA at 301-764-4777.

---

## 1991 AMA Annual Meeting

---

A resolution submitted by the Maryland Delegation to the American Medical Association (AMA) was passed during the AMA Annual Meeting held June 23-27, 1991 in Chicago. The resolution calls for the AMA to honor the contributions made by women serving in the U.S. military by supporting the Vietnam Women's Memorial Project, Inc. This project will lead to the establishment of a Vietnam women's memorial near the site of the Vietnam Veteran's Memorial in Washington, DC.

---

## Conference on Addiction and Physician Health

---

Med Chi's Second Annual Conference on Addiction and Physician Health will be held on Saturday, November 16, 1991 in the Med Chi Faculty Building. Sponsored by the Committee on Physician Rehabilitation and the Committee on Alcoholism and Chemical Dependency, the conference is designed to help health care professionals recognize and treat patients impaired by drugs or alcohol. Slated to fulfill 11 continuing medical education credits, the preliminary program is as follows:

### Preliminary Schedule

8:00 am - 8:45 am	Registration/Check-in
8:45 am - 9:00 am	Conference Overview
9:00 am - 10:00 am	The Role of the Primary Care Physician in the Treatment of Chemical Dependence Dan H. McDougal MD, Med Chi Committee on Physician Rehabilitation
10:00 am - 11:00 am	Assessment and Treatment of Alcoholism in Different Age Groups Franklin T. Evans MD, Chairperson, Med Chi Committee on Alcoholism and Chemical Dependency
11:00 am - 11:15 am	Break
11:15 am - 12:30 pm	Session A: Sexual Exploitation of Patients: Evaluation and Treatment of Sexual Addiction Richard Irons MD, Coordinator, Professional Assessment Program, Golden Valley Treatment Center  Session B: Assessment of Adolescent Chemical Dependency Rev. Edward Reading MDiv, NCAC - II, Assistant Director, Physicians' Health Program, Medical Society of New Jersey

	Session C: Primary Prevention of Impairment in Medical Students Susan Kalia MD, Director, University Health Services, The Johns Hopkins University
12:30 pm - 1:30 pm	Lunch
1:30 pm - 2:30 pm	The Impaired Physician David Canavan MD, Medical Director, New Jersey Physician Health Program
2:30 pm - 3:30 pm	Session A: Drug Testing for Physicians and other Health Providers Stanley R. Platman MD, Vice President for Medical Affairs and Chief of Department of Psychiatry, Addictions and Behavioral Medicine, Homewood Hospital Center, an Affiliate Hospital of the The Hopkins Health System; Chairperson, Med Chi Committee on Physician Rehabilitation
	Session B: The HIV Positive Physician Speaker to be announced
	Session C: Utilizing a Traditional Addiction Treatment Approach in the Treatment of Eating Disorders Townsend Pennington MD, Medical Director, Willough Treatment Center
3:30 pm - 3:45 pm	Break
3:45 pm - 5:45 pm	How to Help Your Patients Stop Smoking Carmine M. Valente PhD, Med Chi Deputy Executive Director and Kevin Scott Ferentz MD, Asst. Prof., Dept. of Family Medicine, University of Maryland School of Medicine

---

## *Doctor/Lawyer/ Teacher Partnership Against Drugs*

---

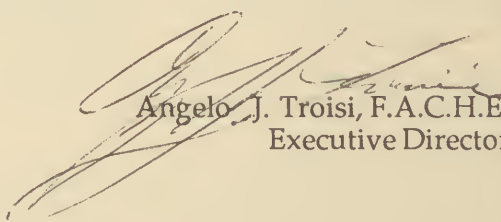
With the new school year just around the corner, Med Chi is seeking physicians who are willing to share their medical expertise and help prevent students from using drugs and alcohol. To volunteer, or for more information about the Doctor/Lawyer/Teacher Partnership Against Drugs, contact Betsy Newman, Med Chi Public Relations Director, at 301-539-0872 or 1-800-492-1056.

---

## *Med Chi Handbook and Bylaws*

---

Copies of the Med Chi *Handbook* for 1991-1992 and the May 1991 edition of the *Bylaws* are now available to all members. The *Handbook* provides a listing of all Med Chi officers, delegates, councilors, and committee members, as well as listings of component medical societies. The *Bylaws* are a guide to the Faculty administration. Members can request a **free** copy of either publication by calling Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056. Non-members may purchase copies of the *Handbook* for \$21.00 and the *Bylaws* for \$10.00.

  
Angelo J. Troisi, F.A.C.H.E.  
Executive Director



# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.



*Lumbar Spine*

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)

# Make an Impact with MMPAC

**JOIN THE CAUSE!  
GET INVOLVED!  
GET POLITICAL!**

**Is it fair that only some Maryland  
physicians support the political activity  
that benefits all physicians?**

**JOIN...**

**MARYLAND  
MEDICAL  
POLITICAL  
ACTION  
COMMITTEE**

Send Your \$100 check to:

John T. Lynn, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201-5585

Contributions to AMPAC and State PAC  
are not deductible as charitable  
contributions for Federal  
income tax purposes





---

# ***The Personality Disorder Treatment Program of Sheppard Pratt Hospital***

Very often, specialized inpatient evaluation and treatment is a critical step in the effective care of a borderline patient.

The Personality Disorder Treatment Program at Sheppard Pratt offers a combination of services that may help to untangle difficult clinical questions and facilitate your patient's continued outpatient treatment.

We offer:

- ☐ Short-term and intermediate-term specialized inpatient treatment
- ☐ Extended-term intensive inpatient treatment
- ☐ Comprehensive diagnostic evaluation
- ☐ Psychotherapy and psychopharmacology consultation
- ☐ Intensive individual and group psychotherapy provided by our staff of psychiatrists and psychologists
- ☐ Long-term treatment planning

If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Adult Admissions Office at:

(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ ***Sheppard Pratt***  
A not-for-profit health system

---

# YOU CAN INFLUENCE POLICY!

At Med Chi's Semiannual Meeting, attendees will take part in open debate on policies that may govern the future of medicine, including:

- Radiation technologist regulations....
- Mammography screening....
- AIDS and HIV testing of health care workers.

Be a part of this forum and have your voice heard!

Meet  
at the  
Beach



**Special Guest Speakers:**  
Antonia Novello, MD,  
*Surgeon General*  
Robert McAfee, MD,  
*AMA Trustee*

**CME**  
*opportunities  
and family  
activities  
planned.*

For reservations at the Carousel Hotel and Resort, Ocean City call 1-800-641-0011.

**The Semiannual Meeting of the Medical and Chirurgical Faculty of Maryland**  
**September 13, 14 and 15, 1991**

For information call 301-539-0872 or 1-800-492-1056.

## REGISTRATION FORM

Med Chi Semiannual Meeting / September 13-15, 1991  
Carousel Hotel and Resort / Ocean City, Maryland

**Med Chi Members - No charge**

**Non-Members - \$35.00**

Name: \_\_\_\_\_  
(Please Print) Last First

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Component Society (County): \_\_\_\_\_

Maryland License No.: \_\_\_\_\_

### Form of Payment

☐ Check (payable to Med Chi)

☐ Visa

☐ Mastercard

Credit Card No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Return this Registration Form and your payment to:  
Med Chi Conventions

1211 Cathedral Street / Baltimore, MD 21201-5585

For additional information, call 539-0872 from the Baltimore area  
or 1-800-492-1056 from elsewhere in Maryland.



### Legal and Ethical Concerns of Your Medical Practice

*This monthly digest will summarize the laws of the State of Maryland, as well as the guidelines, procedures, codes of cooperation, and policy statements of the Medical and Chirurgical Faculty. These laws and policies are being published to reflect recent areas of concern to physicians throughout the State. The Principles of Medical Ethics of the American Medical Association have been adopted as the ethical standards of the Medical and Chirurgical Faculty, and they govern the conduct of members in their relations to the public and to each other (Faculty Bylaws, Article XIII, Section I). For more information, please refer to the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland.*



### DEMPAQ: Development and Evaluation of Methods to Promote Ambulatory Care Quality

The Federal Health Standards and Quality Bureau (HSQB) was given a legislative mandate to conduct, through the Peer Review Organization (PRO) program, a pilot project to review care provided to Medicare beneficiaries in physicians' offices. As a result of this mandate, the Delmarva Foundation for Medical Care, Inc. (DFMC) was awarded \$3,000,000 in federal funding from the Health Care Financing Administration (HCFA) for its unsolicited proposal to develop and evaluate methods for reviewing the *quality of care* provided to Medicare beneficiaries in physicians' offices. DFMC serves as the Peer Review Organization (PRO) for Medicare beneficiaries in Maryland and the District of Columbia.

The title of this pilot project is DEMPAQ (Development and Evaluation of Methods to Promote Ambulatory Care Quality). It is a collaborative effort which will include the following team of researchers: R. Heather Palmer MB, BCh, SM - Harvard School of Public Health; Deborah Garnick ScD - Harvard School of Public Health; Jinnet Fowles PhD - Park Nicollet Medical Foundation; and Jonathan Weiner DrPH - The Johns Hopkins School of Hygiene and Public Health. Two other PROs will also be involved in the project: The Iowa Foundation for Medical Care (IFMC) and the Alabama Quality Assurance Foundation. DFMC, however, will be the prime contractor and will manage the contract.

The goal of the DEMPAQ project is "to develop, implement, and review methodologies that could be used for mandatory office-based review of care received by Medicare beneficiaries and to derive recommendations for full-scale implementation of such a review system within the PRO program."<sup>1</sup> The project will address problems concerning quality of care and those associated with underutilization and overutilization of services.

The review methods used in the project will be *claims profiling* and *medical record review*. "Medicare Part B claims data from the Common Working File will be used to generate computerized profiles of quality and utilization

indicators."<sup>2</sup> (The Common Working File is a Social Security file maintained by the carrier. When a claim is being processed, the carrier queries the file for eligibility information. Once the claim is approved, the carrier updates the file with the most current information concerning the beneficiary.) The profile format will be critiqued by physician consultants prior to sharing the data with profiled physicians. "In order to establish a physician profile, Medicare beneficiaries will be associated with the primary care physician who provides most of the office care for the patient."<sup>3</sup>

Two types of claims profiles will be used: *generic profiles* and focused, *condition-specific profiles*. Generic profiling may include hospitalization, visits to the primary care physician, visits to other physicians, use of ancillary services, and types of visits. Condition-specific profiles may look at a particular diagnosis in relation to visits and testing. Individual physicians will receive their own profiles along with comparison information and will be asked to critique the profiles for relevance and usefulness in relation to the quality of care. The profiles being developed relate to quality assessment and are not to be confused with the profiles (Comparative Performance Reports) developed by HCFA relating to physician payment.

The medical record review portion of the project will examine office-based medical records. The record documentation assessment (RDA) portion will look at six criteria: date of visit, patient complaint or reason for visit, observations regarding the patient, conclusions or diagnosis, plan for patient care or evaluation, and identification of clinician. The clinical performance assessment (CPA) portion will review clinical functions such as: drug prescribing, test ordering, the following of management plans, procedure performance, patient complaint workups, the making of diagnoses, and the provision of prevention/screening.

Physician volunteers will be asked to participate in the medical records review process. General practitioners, family practitioners, and internists will be selected randomly

from a list of doctors who submitted bills to Medicare between July 1, 1989 and June 30, 1990. Each physician volunteer will be requested to provide approximately twenty-five patient records selected randomly from among the patients for whom the physician provided care. The physician participants will be asked to submit records for a two-year period from July 1, 1989 through June 30, 1991. Approximately one hundred physicians from Maryland will be asked to participate in this project.

Physician volunteers who participate in the medical records review will be reimbursed five dollars per chart to cover copying expenses. If the physician does not have copy capabilities, DFMC will go to the physician's office with a portable copier and copy the medical records. "All information submitted will be strictly confidential. No physician or patient-specific information will be released by the project staff, except to the physician in question for educational purposes."<sup>2</sup>

The results of the data collection will be given to HCFA, the Congress who commissioned the project, medical organization liaisons, and participating volunteer physicians. All data, except for the confidential results given to participating volunteer physicians, will be in aggregate form only.

### Physician Consultants

The Medical and Chirurgical Faculty of Maryland (Med Chi) was invited to appoint a physician representative to the DEMPAQ project who would act as a physician consultant. The physician consultant will review a series of technical supplements including draft versions of the Record Review and Claims Profiling criteria. S(he) will provide specific critical comments representative of typical viewpoints of his/her colleagues so that these views can be incorporated into the review instrument.

Med Chi has appointed Robert Ruderman MD, Chairperson of the Faculty's PRO Monitoring Committee, to act as consultant to the DEMPAQ project. Med Chi has requested that Dr. Ruderman provide input into the design, interpretation, and review portion of the project.

### DEMPAQ Meetings

The Maryland Society of Internal Medicine (MSIM) hosted two meetings on November 27, 1990 and February 5, 1991 with DFMC and R. Heather Palmer MB, BCh, SM, Chief Researcher for the DEMPAQ project. Med Chi representatives were invited to these meetings as well as representatives from the American Society of Internal Medicine and the Maryland Academy of Family Practitioners, and the American College of Physicians' (ACP) Governor for Maryland.

Some concerns expressed by physician representatives at the first MSIM meeting on November 27, 1990 were:

1. Studies with a similar focus have been conducted by physicians but HCFA has not been interested in these studies.
2. It is difficult to look at charts from both the standpoint of utilization and acceptable care at the same time and with the same guidelines.
3. A physician must justify every decision s(he) makes in this type of study.
4. Whereas hospital review focuses on the primary diagnosis, physicians in an office setting deliver care to elderly patients who have a variety of complications and problems.
5. Quality of care is difficult to determine from chart review.
6. Physicians are being asked to participate in a study in which HCFA may use the results in a negative manner.
7. Physicians do not trust DFMC's involvement with the research because past experiences have shown DFMC to be insensitive to physician concerns.
8. Many physicians are convinced that the goal of this project is to reduce reimbursement for services and not to increase quality of care.

At the second meeting with DFMC and Dr. Palmer on February 5, 1991, physician representatives emphasized the need to inform physicians that their participation in this project was strictly *voluntary*. Furthermore, the physicians stressed the importance of having reviewers who were familiar with the entire system. A suggestion was made to provide medical groups with the opportunity to review charts determined to be outliers. Concern was also expressed over further modifying the HCFA 1500 form.

Med Chi is committed to keeping the viewpoints and opinions of Maryland physicians before the researchers and DFMC. Therefore, Med Chi representatives will continue to meet with Dr. Palmer and DFMC in the future.

### Report to Council

In a report presented to Med Chi's Council on March 21, 1991, the PRO Monitoring Committee gave a detailed analysis in which it was concluded that the DEMPAQ study had many defects which could be classified as defects of design/intent and defects of credibility. Criticism was directed at the choice of the fiscal intermediary chosen to retrieve the data for the claims profile review, thus opening the study not only to technical errors, but also eliminating a huge segment of practicing physicians in the Washington DC metropolitan area from the study.

Although confidentiality rules apply to PRO reviews, the



Committee felt that there should be no such secrecy involved in a pilot study having such a potential impact on physicians' practices. The credentials of those analyzing the study should be revealed.

It has also been alleged that the project's main intent was to design a Uniform Ambulatory Encounter Form designed to modify the HCFA 1500 forms, and to develop "parameters of care" which, in essence, would mean complete governmental control of medical care and the practice of medicine.

The PRO Monitoring Committee's report to Council concluded that the DEMPAQ study results should be published in a reputable medical journal, such as the *Maryland Medical Journal*, so that the study could be critiqued and analyzed by practicing physicians before any attempt is made to promulgate federal regulations or further studies. Furthermore, Med Chi's PRO Monitoring Committee will be carefully monitoring the activities of the DEMPAQ project and updating the Faculty on the progress of the project.

### Conclusion

While physicians welcome research efforts that focus upon improving the quality of care, it is difficult to view projects funded by HCFA in a positive manner when the PRO is involved. The reason physicians view such an effort with skepticism stems from the fact that the PRO's main function concerns the management of costs and the regulation of physicians. It is understandable that a group, which views physicians critically with an eye on denying reimbursement, is not embraced with physician trust. Certainly physicians have the right to question the PRO's involvement and input in a project that further intrudes into the practice of medicine.

Although the DEMPAQ researchers seem genuinely interested in improving the care delivered in ambulatory settings, the participation of the PRO seems to verify that the whole purpose of this project is to regulate the cost of care delivered by physicians in their offices. The promulgation of such regulations would be highly disruptive to patient care and would further impinge upon the physician-patient relationship.

Whereas cost containment is a legitimate concern with regard to the delivery of health care, adding on another layer of administrative costs to the PRO and to HCFA does not appear to be the answer to that concern. In fact, a research project which should focus upon educating the physician population should not be tied to a special interest group that does not educate physicians but only sanctions them.

It is Med Chi's sincere hope that physician input into the DEMPAQ project will provide the researchers with valuable knowledge concerning medical practice. Toward this end, Med Chi will continue to inform the project collaborators of the concerns and issues vocalized by physicians in Maryland.

### References

1. Technical Proposal for the Review of Office-Based Practice for Medicare Beneficiaries, Executive Summary, p. 1.
2. DEMPAQ, Vol 1, No 1.
3. DEMPAQ Quarterly, Vol 1, No 2, p 3.

**ROBERT RUDERMAN MD**, Chairperson

PRO Monitoring Committee  
Medical and Chirurgical Faculty of Maryland

**ROSE M. MATRICCIANI RN, JD**

Assistant Executive Director for Health Care Policy  
Medical and Chirurgical Faculty of Maryland

### ✧ Authors of Articles ✧

Along with manuscripts submitted to **MMJ**, please send an IBM compatible floppy disk, with the document entered in a Word Perfect, Multimate, or Wordstar program.

At your request, **MMJ** will return your disk after your article is published or if your manuscript is not accepted.

INTERIOR DESIGN • SPACE PLANNING •  
FURNITURE & CABINETRY SELECTION • CUSTOM  
CABINETRY • SURGI-CENTERS • SURGERY &  
AMBULATORY CARE FACILITIES • MEDICAL &  
DENTAL OFFICES • LABORATORIES • MEDICAL  
OFFICE BUILDINGS • CONSTRUCTION  
ADMINISTRATION • COST ESTIMATING



**LEVIN/BROWN & ASSOCIATES**  
ARCHITECTS/INTERIOR DESIGNERS

17 Warren Road  
Suite 7B  
Baltimore, MD 21208  
(301) 486-9006



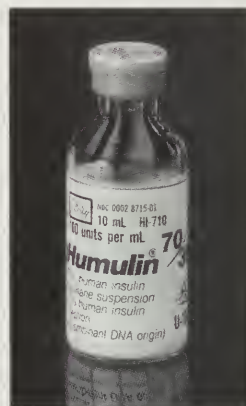


For your insulin-mixing  
or NPH-using patients

## Humulin<sup>70/30</sup> makes life easier

**Rapid onset and sustained  
duration insulin activity  
in a single vial**

- May offer enhanced control through a more physiologic activity profile
- Accurate dosing—eliminates mixing errors
- Convenient premixed dose for better compliance
- Easy to use—for patients who find mixing difficult



**Specify**  
**Humulin<sup>70/30</sup>**  
*70% human insulin  
isophane suspension  
30% human insulin injection  
(recombinant DNA origin)*

**Humulin has  
just the right mix**

Any change of insulin should be made cautiously and only under medical supervision.

Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species (beef, pork, beef-pork, human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

*Leadership In Diabetes Care*



**Eli Lilly and Company**  
Indianapolis, Indiana  
46285



### Evaluation of Patients with Liver Tumors for Resectability

Several factors must be considered in the preoperative evaluation of the patient being considered for liver surgery. These include the nature of the lesion and its symptoms, the location of the lesion in relation to the inflow and outflow vessels, the condition of the rest of the liver, and the general condition of the patient.

Asymptomatic patients with simple cysts of the liver, cavernous hemangiomas, focal nodular hyperplasia, and liver cell adenoma should be followed for a period of time and operated on only if there is evidence of growth or if symptoms develop.

Since the late 1980s, most of the patients with acute pyogenic abscess of the liver are being treated, at least initially, by antibiotics and radiographically controlled catheter drainage rather than by operative drainage. On the other hand, hydatid cysts with viable parasites must be managed operatively, but not by resection. Sterilization of the cyst contents with hypertonic saline solution or silver nitrate followed by removal of the endocyst is easily done; this is as effective and much safer than resection.

Primary liver cancer occurring in the noncirrhotic liver should be resected if possible. This is particularly true for patients with fibrolamellar variant which is eminently curable. Primary liver tumors in cirrhotic patients should probably not be resected for several reasons. These include: (1) borderline hepatocellular function, which may decompensate after anesthesia and surgery; (2) inability of the liver to regenerate; (3) possible multifocal origin of hepatocellular carcinomas in cirrhotic patients; (4) poor prognosis and dismal long-term survival rates in those patients with cirrhosis who have survived an operation for primary cancer.

Localized and limited metastatic colorectal cancer and soft tissue sarcoma should be resected if there is no evidence of metastasis outside the liver. Liver resection for metastasis for most other common cancers has not been proven to be of any benefit. Palliative resection of metastatic tumors (i.e., debulking, leaving known residual disease in the liver or elsewhere) should not be done. A possible exception to this rule is justified in patients with very slow growing tumors (e.g., metastatic carcinoid tumors to the liver) for whom the size of the tumor or its hormonal production has made life unbearable and for whom there is no other effective therapy.

The nature of a liver lesion can usually be determined preoperatively by the use of selective laboratory tests and imaging. A careful history and physical examination may raise suspicion of abscess, hydatid cyst, or primary or secondary liver cancers. Elevation in the blood levels of alpha-fetoprotein, carcinoembryonic antigen, or echinococcal

serologic tests suggest a specific diagnosis. Focal nodular hyperplasia, and liver cell adenoma must be considered in young women.

Ultrasonography is effective in distinguishing cystic from solid masses and is quite useful in determining the proximity to or involvement of major vessels, especially if used intraoperatively. Computed tomography (CT) is more effective in determining the size and number of lesions. Magnetic resonance imaging (MRI) may be utilized for more detail in some cases, but it *should not* replace CT scanning for two reasons: (1) It is more expensive and may not add any more information than the CT and (2) CT scans give better imaging of the retroperitoneal space and the status of the lymph nodes. However, MRI can be used after CT, based on the radiologist's request, to evaluate an infiltrative process in the liver or to help in the diagnosis of cavernous angiomas of the liver. Nucleotide scan with tagged red blood cells can be helpful in the diagnosis of cavernous hemangiomas. Angiography currently plays a less important role in making the diagnosis of liver tumor. However, it remains essential for preoperative evaluation to provide a road map of the feeding arteries and veins of the liver. Recently, CT-angiography has been very valuable in preoperative evaluation of lesions in the liver, their proximity to vessels, and the architecture of the blood supply to the liver.

Needle biopsy is not effective with cystic lesions and even dangerous in patients with hydatid cysts, hemangiomas, and some hypervascular tumors. Needle aspiration for cytologic diagnosis may be useful for the diagnosis of some primary or metastatic cancers, but it will not be adequate for the diagnosis of most benign tumors. When doubt persists about the nature of the lesion, open wedge biopsy will be needed. It is the clinician's responsibility to rule out the presence of curable cancer, either by establishing another diagnosis or by demonstrating unresectability.

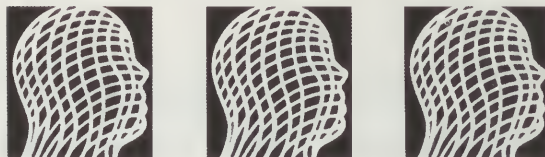
The resectability of an isolated liver lesion is determined by its proximity to the structures in the liver hilum and to the inferior vena cava, keeping in mind the necessity of securing a margin of normal liver tissue. Hemangiomas and adenomas do not invade adjacent vessels and, therefore, can be enucleated even if they are distorting major veins. Direct invasion of major vessels is characteristic of hepatomas and usually precludes curative resection. It is highly recommended that a 1 cm margin of resection be obtained at the time of resection. Resectability can thus be defined as the ability to remove a lesion without compromising the inflow and outflow vessels and ducts to a residual healthy liver that can sustain life. Implicit in this definition is the functional

status of the liver parenchyma uninvolved by the disease. Hyperbilirubinemia is a grave prognostic sign. In addition to adequate liver function, safe major liver resection can be done only in patients with intact hemostasis and a cardiovascular system capable of tolerating some hemodynamic instability. Coagulopathies, particularly those with diminished platelet function, should preclude elective resections. In spite of the most meticulous technique, innumerable small vessels will be transected without surgical control, and the outcome will depend on the patient's ability to provide hemostasis.

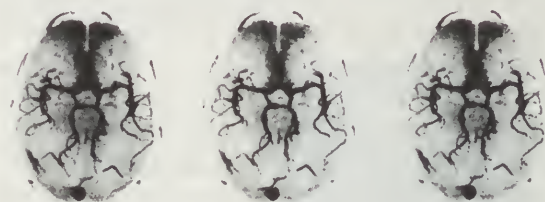
*E. GEORGE ELIAS MD, PhD*  
Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland

*Tumor conferences are held weekly on Tuesday between 8 and 9 am in Room S9A06 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call 301-328-5224 by noon Monday to be placed on the schedule. Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD.* ■

## *A New Era of MRI Capability*



### *Three-Dimensional Magnetic Resonance*



### *Magnetic Resonance Angiography*

- MRI/MRA technology not available anywhere else in the immediate area
- 1.0 tesla magnet manufactured by Siemens, a world leader in advancing MRI applications
- Convenient location, 1/2 mile east of I-95, on the campus of the Greater Laurel-Beltsville Hospital
- Board Certified Radiologists with training and experience in MRI.
- Next Day scheduling in most cases

*Open Monday - Friday*  
8:00 AM to 11:00 PM



7400 Van Dusen Road  
Laurel, Maryland 20707

(301) 725-8995

**" THE BEST CARE ANYWHERE "**

## ***Advanced-Care*** **AMBULANCE**



**665-0550**

RADIO DISPATCHED  
CLEAN MODERN VEHICLES  
24 HOURS A DAY - 7 DAYS A WEEK  
FULLY LICENSED EMERGENCY MEDICAL TECHNICIANS  
LOCAL AND LONG DISTANCE TRANSPORTS  
WE BILL MAJOR INSURANCE COMPANIES  
MEDICARE AND MEDICAID APPROVED

LOCATED IN THE  
MITCHERLING BUILDING • 9413 HARFORD RD.



## A Clinical Moment With ... Diabetes

### Diabetes Education

*Doctor, When I was diagnosed as having insulin dependent diabetes two weeks ago, I spent three days in the hospital before being sent home. While there, I had a crash course in self-monitoring of blood glucose, insulin administration, and meal planning. One month ago I was well. Now I have diabetes which places many restrictions on my lifestyle that I do not understand. I want to control my diabetes as well as possible and prevent complications, but I need help.*

This is a typical situation for an acute onset insulin-dependent diabetic patient in the current system of diabetes management. Because of hospital utilization rules, hospital stays are not long enough for patients to obtain complete training in the care of their problem. Emergency issues (blood glucose testing, insulin administration techniques, and beginning diet instruction) are taught in a crash course fashion. The patient is then discharged to an outpatient program for further instruction and management. Administratively, a brief hospital stay is mandated in order to save funds for the insurance programs, but practically, it is also good for the patient since the final stage of diabetes regulation should be done in a normal living situation. Unfortunately, diabetes instruction ceases for many patients on discharge from the hospital.

In Maryland, there are approximately one hundred instructors qualified as Certified Diabetes Educators (CDEs) who are distributed fairly evenly throughout the State. CDEs are available to help physicians and patients with the next stage of diabetes management -- Education. A good diabetes education program consists of forty hours of training, of which four to six hours should be meal planning and evaluation of packaged food labels. Other segments cover foot care, exercise, hypoglycemia and hyperglycemia manage-

ment, management of other complications of diabetes, traveling, eating out, insurance, purchasing of supplies, pregnancy, and emotional aspects of long-term illness. Group programs are usually more effective than individual instruction because of the interaction of the attendees. Diabetic patients should attend an update or refresher program of four to six hours duration on an annual basis. If a patient participates in adequate diabetes training programs, the initial stay in the hospital should be the only admission for diabetes in his or her lifetime except for pregnancies, surgeries, or other special situations.

CDEs and diabetes education programs may be contacted through a hospital or the local branch of the American Diabetes Association. It is the physician's responsibility to recommend a diabetes education program in which s(he) has confidence and with which s(he) has regular contact. At the completion of the program, the physician should receive an evaluation which includes suggestions as to any areas in which the patient may need training.

DEWITT E. DE LAWTER MD  
Editor

### A CLINICAL MOMENT WITH...

Physicians in all specialties are invited to submit synopses of current clinical problems in a question and answer format.

Write: **A Clinical Moment With...**  
*Maryland Medical Journal*  
**1211 Cathedral Street**  
**Baltimore, MD 21201-5585**

## Maryland Advertisers!

To advertise in Med Chi Publications contact:

**Network Publications**

**2701 N. Charles Street, Baltimore, MD 21218**

**301-235-0500 FAX 301-235-0689**

# BEFORE YOU BUY INSURANCE, WE RECOMMEND YOU SEE A DOCTOR



Word-of-mouth is our best advertising. So we urge you: get the word.

Talk to any of the 13,000 doctors with professional liability insurance from The P-I-E Mutual.

These doctors own this company. More than 160 of them sit on our 13 managing boards. They help to shape policy,

influence selection of applicants, consider the merits of claims.

They're benefactors of a program that offers discounts to loss-free members. And the protection of a prepaid law firm that is seasoned in all areas of claims, and wins 90% of cases that go to court.

Call us.

1-800-228-2335. Get the facts, doctor to doctor.



---

THE P-I-E MUTUAL  
INSURANCE COMPANY

---

NORTH POINT TOWER  
1001 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114-1149



WINTERICH-NEFF & ASSOCIATES  
7 EAST REDWOOD, SUITE 810  
BALTIMORE, MARYLAND 21202  
301-234-2800



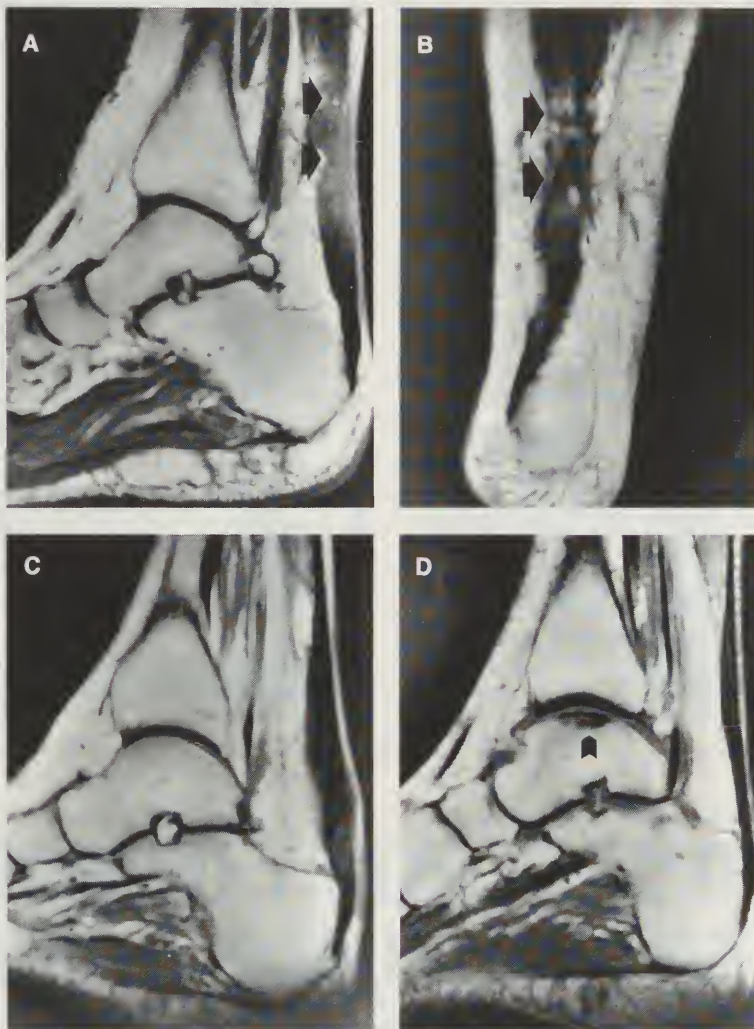
# Our Pictures Are Worth A Thousand Words.<sup>TM</sup>

## Case #16

A 56 year old female fell and immediately experienced posterior ankle and calf pain.  
**DIAGNOSIS: Torn Achilles tendon.**

The sagittal (A) and coronal (B) MR images demonstrate discontinuity (arrows) of the Achilles tendon with retraction and laxity of the musculotendinous junction as well as increased signal within the tendon.

MRI provides a comprehensive evaluation of the integrity of both the osseous structures and soft tissues of the traumatized painful ankle. With respect to Achilles tendon pathology, MRI permits the differentiation of partial tear, complete tear, tendonitis and



peritendinous retrocalcaneal bursitis. In the context of traumatic tears, MRI defines the site of injury relative to the calcaneus and musculotendinous junction and quantitates the degree of tendon retraction.

Figure C demonstrates a diffusely thickened but intact Achilles tendon in a patient with chronic tendonitis. A normal Achilles tendon is illustrated in Figure D. Also note the subchondral osteonecrosis in the talus (arrowhead).

At Drs. Copeland, Hyman & Shackman, P.A. we are proud of our high resolution, state-of-the-art imaging. We look forward to consulting with you on any diagnostic imaging procedure in order to best serve you and your patients in the most expeditious and economic manner.



We provide convenient evening and weekend hours at both MRI locations, double-readings for quality assurance, and FAX capabilities for delivering reports immediately.

**You work hard to gain your patients' trust and confidence. At Drs. Copeland, Hyman & Shackman, we'll help you keep it.**

## Drs. Copeland, Hyman & Shackman P.A.

MRI Examinations available at:

Pomona Square Suite 119  
1700 Reisterstown Rd.  
(301) 486-8830

White Square Imaging Center  
9105 Franklin Square Drive  
(301) 574-8880

Harford Imaging Center  
104 Plumtree Rd./Bel Air  
Opening Summer 1991  
(301) 515-4000

**Drs. Copeland, Hyman & Shackman are pleased to announce the opening of the Harford Imaging Center in the summer of 1991, including MRI, CT, nuclear medicine, ultrasound, low-dose mammography and general x-ray services.**

## MARYLAND/EASTERN SHORE

Opportunity for career-oriented full-time Emergency Physician to practice in an ideal setting. Memorial Hospital at Easton is a 217 bed, level II center with 18,000 ED visits per year and offers a top notch salary and benefit package (including 8 weeks paid annual leave), CME, supportive Administration and excellent medical staff back up. The Easton area offers the best of Chesapeake Bay recreation, food and family life.

Please contact: Richard A. Marasa, M.D., FACEP  
Chief, Emergency Department  
Memorial Hospital  
South Washington Street  
Easton, Maryland 21601  
1-800-666-3222 Ext. 5607



EOE

## BECO MANAGEMENT, INC.

### Medical Suites Available

Montgomery Village Professional Center  
19201 - 19271 Montgomery Village Avenue  
Gaithersburg, Maryland

Southern Medical Building  
9131 Piscataway Road  
Clinton, Maryland

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550

## We Build Beautiful Sunlit Home Additions



Sunspace Design  
Studio, Inc.

(301) 882-6200

MHIC 16069

# YOUR SPECIALTY IS WORTH AN EXTRA \$8,000 A YEAR.



If you're a resident in any of the following specialties:

- anesthesiology
- cardiac/thoracic surgery
- orthopedic surgery
- pediatric surgery
- general surgery
- peripheral/vascular surgery
- neurosurgery
- plastic surgery
- colon/rectal surgery

you could be eligible for an \$8,000 annual stipend in the Army Reserve's Specialized Training Assistance Program.

You'll also be using your skills in a variety of challenging settings, from major medical centers to field hospitals, and there are opportunities for conferences and continuing education.

We know your time is valuable, so we'll be flexible about the time you serve. Your immediate commitment could be as little as two weeks a year.

with a small added obligation later on. If you'd like to talk to an Army Reserve physician, or if you'd like more information about the stipend program or other medical opportunities, call our experienced Army Reserve Medical Counselor:

Major Michael W. Salmons  
(301) 997-3526 Collect

**BE ALL YOU CAN BE.<sup>®</sup>**  
**ARMY RESERVE**



# Minutes of the Annual Session of the Med Chi House of Delegates (333rd Meeting)

Medical and Chirurgical Faculty of Maryland  
Wednesday, May 8, 1991

The 333rd meeting of the House of Delegates of the Medical and Chirurgical Faculty was held on Wednesday, May 8, 1991 at the University of Maryland, University College Center for Adult Education, College Park, Maryland.

Officers present were Reynaldo L. Lee-Llacer MD, President; Jose M. Yosuco MD, Treasurer; Marvin Schneider MD, Chairperson of the Council; Gary Rosenberg MD, Vice Chairperson; and J. David Nagel MD, President-elect. Also present but not on the podium was Lawrence H. Fink MD, Treasurer-elect.

The following delegates (or alternates) were registered as being in attendance; an asterisk (\*) next to a name denotes an alternate delegate.

## ■ Allegany County

Frederick Miltenberger MD

## ■ Anne Arundel County

Candace I. Chandler MD  
Hilary T. O'Herlihy MD

Cornelia M. Dettmer MD  
Astrida A. Plucis-Turkopolus MD

## ■ Baltimore City

Paul Burgan MD  
Augusto R. DeLeon MD  
Albert Folgueras MD\*  
Claude D. Hill MD  
Murray A. Kalish MD  
Raymundo S. Magno MD  
Samuel I. O'Mansky MD  
Bernard R. Shochet MD  
J. Andrew Sumner MD  
Richard B. Williams MD

Gaylord L. Clark, Jr. MD  
Willarda V. Edwards MD  
Frank A. Giargiana, Jr. MD  
Thomas E. Hunt MD  
James D. Levy MD  
Donald W. Mintzer MD  
Stephen K. Padussis, MD  
John A. Singer MD  
Karl H. Weaver MD  
Joseph W. Zebley MD

## ■ Baltimore County

Ruben F. Ballesteros MD  
Herman Brecher MD  
Deusdedit Jolbitado MD  
Scott M. Rifkin MD  
H. Russell Wright, Jr. MD

Marianne Benkert MD  
Benjamin V. DelCarmen MD  
John M. Krager MD  
Margaret L. Sherrard MD

Henry J. Farkas MD

Krishan M. Mathur MD

Paul A. Staggs MD

J. Fred Baker MD

Herbert H. Leighton MD

Rose Mary H. Bonsack MD

Joyce M. Boyd MD

Jeffrey A. Abend MD  
Neil J. Barkin MD  
Christine D. Berg MD\*  
Joseph J. Genovese MD  
Ira P. Krefting MD  
Ralph E. Longway MD  
Bruce E. Rubin MD  
Peter B. Sherer MD

Harbhajan S. Ajrawat MD\*  
Zorayda M. Lee-Llacer MD  
Myron I. Murdock MD  
David N. Robb MD

John R. Smith MD

J. Roy Guyther MD

Eva M. Smorzaniuk MD

Edward W. Ditto, III MD

## ■ Cecil County

## ■ Charles County

Guillermo Sanchez MD

## ■ Dorchester County

## ■ Frederick County

Gordon M. Smith MD\*

## ■ Garrett County

## ■ Harford County

Ben Oteyza MD

## ■ Howard County

Charles E. Taylor MD

## ■ Montgomery County

Benjamin Avrunin MD  
Carol L. Bender MD  
Lawrence H. Fink MD\*  
Barton J. Gershen MD  
Charles H. Ligon MD  
Edward S. Mehlman MD  
Mark S. Seigel MD  
Margaret T. Snow MD

## ■ Prince George's County

John E. Jeffrey MD  
George S. Malouf, Sr. MD  
Abdul Nayeem MD  
Robert Ruderman MD

## ■ Queen Anne's County

## ■ St. Mary's County

## ■ Talbot County

## ■ Washington County

## ■ Wicomico County

*James A. Cockey MD*

*Hilda I. Houlihan MD*

## ■ Council

*Thomas E. Allen MD*

*Raymond M. Atkins MD*

*Alex Azar MD*

*Albert L. Blumberg MD*

*Louis C. Breschi MD*

*Aurelio C. DeLaPaz MD*

*Michael R. Dobridge MD*

*Esther Edery MD*

*Joseph S. Fastow MD*

*Lawrence H. Fink MD*

*Vincent D. Fitzpatrick MD*

*Carol W. Garvey MD*

*Abdolhamid Ghiladi MD*

*Fred A. Gill MD*

*Nelson G. Goodman MD*

*Susan R. Guarnieri MD*

*Frederick J. Hatem MD*

*John H. Hebb MD*

*Joseph H. Hooper MD*

*Allan D. Jensen MD*

*Henry P. Laughlin MD, ScD, ScSd*

*Reynaldo L. Lee-Llacer MD*

*Herbert H. Leighton MD*

*Donald T. Lewers MD*

*George S. Malouf, Sr. MD*

*Herman C. Maganzini MD*

*Francis C. Mayle, Jr. MD*

*Jack C. Meshel MD*

*Leslie R. Miles, Jr. MD*

*J. David Nagel MD*

*Hiroshi Nakazawa MD*

*Hilary T. O'Herlihy MD*

*Gary L. Rosenberg MD*

*Marvin Schneider MD*

*John R. Smith, Jr. MD*

*Joseph Snyder MD*

*Paul A. Stagg MD*

*Cheryl E. Winchell MD*

*Jeffrey F. Witte MD*

*Jose M. Yosuido MD*

*Also present were members of the Faculty's staff.*

**T**he meeting was called to order at 10 am on Wednesday, May 8, 1991 by the President, Reynaldo L. Lee-Llacer MD, at the University of Maryland, University College Center for Adult Education, College Park, Maryland.

## ■ County Flags

It was noted that the county banners representing the component societies would be on permanent display in Osler Hall. Dr. Lee-Llacer thanked those physicians who were instrumental in assisting in this project to obtain and display the colorful symbols of each of the twenty-four counties of the State.

## ■ Invocation

Leslie R. Miles, Jr. MD, Chairperson of the Committee on Medicine and Religion, delivered the invocation.



(l to r) George S. Malouf, Sr. MD, Ted Lewers MD, and J. David Nagel MD confer before a meeting of the House of Delegates.

## ■ Americana Slide Show

The AMA's videotape, "Americana," celebrating the history and accomplishments of the many people who make up our great country was shown as a patriotic salute to our common heritage.

## ■ Parris N. Glendenning

Parris N. Glendenning, the Prince George's County Executive presented a proclamation to Med Chi and opened the program by proclaiming the week of May 7 to 11 as "Doctors Week in Prince George's County." He went on to describe the close association the County has always had with the medical profession.

After his presentation, Mr. Glendenning was presented with a Certificate of Appreciation.

## ■ Visiting Dignitaries

Visiting dignitaries to this annual meeting were acknowledged as follows: Dr. John Tupper, President of the AMA; Dr. Alex Alexander, President of the American College of International Physicians; Dr. James Marvel, Delaware Medical Society; Dr. Gordon McCloud and his wife, Jane, from the Pennsylvania Medical Society; Dr. John Owen, Jr. and his wife, Wanda, from the Virginia Medical Society; Dr. William E. Ryan from the New Jersey Medical Society; and Dr. Michael Stump and his wife, Priscilla, from the West Virginia Medical Society.



■ **Laughlin Award for Citizenship**

Maryland's Lieutenant Governor Melvin ("Mickey") Steinberg was presented with the *Dr. Henry P. and Page Laughlin Award for Citizenship*. Following the presentation, Lt. Governor Steinberg spoke on the important role physicians have in the legislative process, as well as to the citizenry of Maryland.

■ **Minutes of the Previous Meeting**

The minutes of the September 15, 1991 Semiannual Meeting were approved.

■ **Necrology**

In the absence of the Secretary, Harold B. Bob MD, the President-elect, J. David Nagel MD, read the list of deceased members.

—**Allegany County**

*Richard A. Johnson MD* December 22, 1990

—**Anne Arundel County**

*Aris T. Allen MD* February 8, 1991

*James E. Wheeler MD* May 10, 1990

—**Baltimore City**

*Frederick K. Adams MD* January 29, 1991

*Rudolph Almaraz MD* Not available

*Jose D. Arana MD* February 3, 1991

*Robert F. Chenowith MD* April 25, 1990

*Odom N. Coker MD* August 17, 1990

*Emanuel S. Ellison MD* July 29, 1990

*George Entwisle MD* December 24, 1990

*Joseph R. Gladue MD* December 2, 1990

*Hugh J. Jewett MD* May 1990

*Benjamin Klotz MD* April 25, 1990

*Kenneth L. Malinow MD* April 6, 1991

*George B. Mansdorfer MD* September 28, 1990

*W. Kenneth Mansfield MD* December 24, 1990

*Harry W. Primakoff MD* September 13, 1990

*Robert A. Robinson MD* August 16, 1990

*Isadore Sborofsky MD* June 30, 1990

*Sol Smith MD* January 12, 1990

*Wilfred H. Townshend, Jr. MD* September 15, 1990

*Arthur M. Wagner MD* May 2, 1990

*E. David Weinberg MD* January 2, 1991

*Andrew P. Weinfeld MD* December 22, 1990

*Israel Zeligman MD* May 23, 1990

—**Baltimore County**

*Ruth M. Allen MD* September 28, 1990

*Stanley J. Bociek MD*

Not available

*Lawrence N. D'Elia MD*

January 7, 1991

*Andre V. Fesus MD*

August, 1988

*Dennis T. Jones MD*

April 26, 1991

*Edward L. Krieg MD*

October 8, 1990

*Eugene F. Nevy MD*

February 2, 1990

—**Calvert County**

*Robert DeVillarreal MD*

November 10, 1989

*Page C. Jett MD*

Not available

—**Frederick County**

*Jesse S. Fifer MD*

April 15, 1990

*Bernice L. Wedum MD*

February 27, 1990

—**Howard County**

*Irwin H. Moss MD*

January 1990

*Anthony J. Young MD*

August 16, 1990

—**Montgomery County**

*Rowland H. Bedell MD*

April 4, 1990

*John P. Fort MD*

June 17, 1990

*Robert C. Haile MD*

March 22, 1990

*Joel B. Hoberman MD*

November 1990

*Abraham A. Levine MD*

September 24, 1990

*Robert E. McCullough MD*

October 21, 1990

*Edward T. O'Donnell MD*

September 30, 1990

*Norman C. Rintz MD*

1986

*Josiah Sacks MD*

March 3, 1991

*Ashby W. Smith MD*

December 26, 1988

*George R. Spence MD*

September 9, 1990

*Mark F. Weinstein MD*

May 3, 1990

*Yilmaz Yamaner MD*

February 23, 1989

—**Prince George's County**

*Gultekin Ovacik MD*

November 27, 1990

—**St. Mary's County**

*G. Josephine Garner MD*

December 12, 1990

—**Talbot County**

*Justin T. Callahan MD*

Not available

—**Washington County**

*Isadore B. Lyon MD*

March 24, 1991

*Stanley H. Macht MD*

May 22, 1990

*Robert M. Russell MD*

December 8, 1990

*Ralph S. Stauffer MD*

Not available

—Wicomico County

Harry D. Cooper MD August 31, 1990

James Patrick Gallaher MD January 9, 1991

—Worcester County

Clifford E. Schott MD July 29, 1989

■ Memorial Resolutions

On motions of the Secretary, the following resolutions, read by J. David Nagel MD, President-elect, were adopted unanimously by the House, each on a separate division vote:

**ARIS T. ALLEN MD**  
1910-1991

Whereas, Delegate Aris T. Allen MD was born in San Antonio, Texas and his early education included both informal and formal training in a wide variety of disciplines from automobile mechanics to drafting. In 1936, Dr. Allen obtained a federal job in Washington DC which allowed him to work days and complete his high school and undergraduate education in the evenings.

Whereas, Dr. Allen graduated from the Howard University Medical School in 1944 with his medical degree. Since 1945, Dr. Allen practiced medicine in Annapolis, Maryland. As an active member of numerous civic, professional, and political organizations, Dr. Allen held positions of leadership and received many awards for his services.

Whereas, Dr. Allen is notable as being the first black physician to serve as an officer in the state medical society, the Medical and Chirurgical Faculty; to represent Anne Arundel County in the state legislature; to win nomination to statewide office in 1978 as the running mate of Republican gubernatorial candidate, J. Glenn Beall, Jr.; and to become Chief of Staff at the Anne Arundel General Hospital. Dr. Allen represented Anne Arundel County in the House of Delegates from 1967-1974 and in the Senate from 1979-1982. As a former state Republican Party chairperson, Dr. Allen returned to the legislature after an eight-year absence by winning election in November 1990 to his former seat in the 30th District.

Whereas, He will be remembered for his irrepressible wit, his indomitable spirit, as an inspiration to all who knew him, and his courage and humor are a legacy that will be cherished; and

Whereas, His death will leave a very real void in the lives of his family, friends, former patients, constituents, and colleagues, therefore, be it

*Resolved,* That this House of Delegates of the Medical and Chirurgical Faculty of Maryland on May 8, 1991 adopts this Resolution with an expression of profound sorrow on the death of Dr. Allen; and be it further

*Resolved,* That this resolution be spread upon the minutes of this meeting and a copy sent to his wife, Dr. Faye Watson Allen, in recognition of the high esteem in which Dr. Allen was held and will be remembered.

**J. RAYMOND GLADUE MD**  
1922 - 1990

Whereas, J. Raymond Gladue MD, a native of Woonsocket, Rhode Island, attended the University of Rhode Island and the University of New Hampshire. He served in the Army during World War II before completing his education at the University of Rochester Medical School in 1948. He served his internship and residency at Baltimore City Hospitals (now the Francis Scott Key Medical Center).

Whereas, He retired about two years ago after ten years as Assistant Medical Director at the Deaton Hospital and Medical Center and had been Medical Director of the Jenkins Memorial Home for about fifteen years. Earlier, Dr. Gladue had been a staff doctor for the Veterans Administration and maintained a private practice in Internal Medicine in Baltimore.

Whereas, He founded and served as president of the American Association of Nursing Home Physicians. He also served as a consultant to the Social Security Administration and held other governmental posts, as well as enjoying memberships in many professional and religious organizations.

Whereas, Dr. Gladue served with dedication as a member of the Baltimore City Medical Society and the Medical and Chirurgical Faculty of Maryland.

Whereas, He will be remembered for his irrepressible wit, his indomitable spirit, and as an inspiration to all who knew him, and his courage and humor are a legacy that will be cherished; and

Whereas, His death will leave a very real void in the lives of his family, friends, former patients, and colleagues, therefore; be it

*Resolved,* That this House of Delegates of the Medical and Chirurgical Faculty of Maryland on May 8, 1991 adopts this resolution with an expression of profound sorrow on the death of Dr. Gladue; and be it further

*Resolved,* That this resolution be spread upon the minutes of this meeting and a copy sent to his wife, Mrs. Dorothy Whittington Gladue, in recognition of the high esteem in which Dr. Gladue was held and will be remembered.

**JAMES PATRICK GALLAHER MD**  
1925 - 1991

Whereas, James P. Gallaher MD, born in St. Mary's, West Virginia in 1925, received his medical degree from the University of Maryland, interned at Reading Pennsylvania Hospital and served his residency in Obstetrics and Gynecology at University Hospital, Baltimore, Maryland; and

Whereas, He began his practice of Obstetrics and Gynecology in Salisbury in 1955; and

Whereas, Dr. Gallaher then served devotedly as a physician for his beloved patients, as a dependable colleague for his fellow professionals, and as a leader within the Medical Staff of Peninsula General Hospital Medical Center; and

Whereas, He served as President of the Wicomico County Medical Society in 1960 and remained an active member even though semi-retired from his private practice; and



Whereas, He was a Fellow of the American College of Surgeons and of the American College of Obstetrics and Gynecology; and

Whereas, He served with pride as a member of the Medical and Chirurgical Faculty of Maryland; and

Whereas, He will be long remembered for his incisive mind, his devotion to his friends and colleagues, his inspiration to many and particularly by the multitude of patients whose lives he touched and whose pain and joy he witnessed; and

Whereas, His untimely death has created a terrible void in the lives of his family, friends, former patients, and colleagues; and

Whereas, the Wicomico County Medical Society and the Medical and Chirurgical Faculty of Maryland express their sympathy to his family; therefore, be it

*Resolved*, That this House of Delegates of the Medical and Chirurgical Faculty of Maryland on May 8, 1991 adopts this resolution with an expression of profound sorrow on the death of Dr. Gallaher; and be it further

*Resolved*, That this Resolution be spread upon the minutes of the House of Delegates at its annual meeting, with a copy sent to his wife, Mrs. Sara Gallaher.

#### ■ Fifty-Year Members

Fifty-year certificates were presented to the following members:

##### —Baltimore City

<i>Max Baum MD</i>	<i>Herman H. Baylus MD</i>
<i>Herman K. Goldberg MD</i>	<i>C.E. Leach MD</i>
<i>Edward F. Lewison MD</i>	<i>Ephraim T. Lisansky MD</i>
<i>Joseph R. Myerowitz MD</i>	<i>Gilbert E. Rudman MD</i>
<i>Frederick Vollmer MD</i>	<i>Daniel G. Wehner MD</i>
<i>Gibson J. Wells MD</i>	

##### —Baltimore County

*Roger G. Windsor MD*

##### —Howard County

*Charles S. Whitaker MD*

##### —Wicomico County

*Marion H. Gillis MD*

Dr. Lee-Llacer asked for a round of applause for all who had attained the honor of fifty years of membership in the Medical and Chirurgical Faculty of Maryland. He indicated the fifty-year members would have their certificates mailed to them.

#### ■ AMA-ERF Checks

The American Medical Association-Education and Research Foundation (AMA-ERF) checks to the medical schools in Maryland were presented by Mrs. Lindhardt and Mrs. Figueroa, President of the Auxiliary.

A check for \$14,120 in unrestricted funds and a check for \$7,804 in restricted funds was presented to Dr. H. Frank Herling, Assistant Dean of Student Affairs, The Johns Hopkins University School of Medicine.

A check for \$1,755 in unrestricted funds and a check for \$2,514 in restricted funds was presented to Col. Robert Fechner on behalf of the Uniformed Services University of Health Sciences, Henry M. Jackson Foundation.

A check for \$22,164 in unrestricted funds and a check for \$8,350 in restricted funds was presented to Dr. Richard Richards, Acting Dean of the University of Maryland School of Medicine.

#### ■ Wyeth-Ayerst Laboratories Physician Award

The Wyeth-Ayerst Laboratories Physician Award for Community Service (formerly the A.H. Robins Award) was presented to Dr. Donald Theodore Lewers by Raymond Langston, the District Manager of the Eastern District of Wyeth-Ayerst. The Award is presented each year to a physician who has provided outstanding service to his or her community outside the field of medicine. Dr. Lewers has devoted countless hours to the preservation of wildlife and the environment on Maryland's Eastern Shore.

#### ■ Physician's Practice Digest

*Physician's Practice Digest*, a new quarterly magazine published by Med Chi focusing on administrative needs of physicians (as opposed to scientific matters, which will continue to be included in the *Maryland Medical Journal*), won a special award in the national competition for excellence in medical journalism sponsored by Sandoz Pharmaceuticals. The award was presented to the President, by Ms. Barbara Stern, a Sandoz Pharmaceuticals representative. Dr. Lee-Llacer thanked Ms. Stern for the beautiful award.



Members of the Auxiliary engage in conversation while waiting for a lecture to begin at the 1991 Annual Meeting at College Park, Maryland.

■ **Certificates of Recognition**

Dr. Lee-Llacer presented certificates of recognition to four Med Chi committee chairpersons for their outstanding service and dedication. Certificates were presented to Dr. Sidney B. Seidman, Chairperson of the Peer Review Committee; Dr. Stanley R. Platman MD, Chairperson of the Committee on Physician Rehabilitation; Dr. Fred C. Gill, Chairperson of the Committee on AIDS; and Dr. John Bartlett, Vice Chairperson of the Committee on AIDS.

■ **Doctor/Lawyer/Teacher Partnership Against Drugs**

A special certificate was presented to Dr. Hiroshi Nakazawa, Chairperson of the Public Relations Committee and Statewide Coordinator for the Doctor/Lawyer/Teacher Partnership Against Drugs program, by Dr. Lee-Llacer to thank him for his ongoing dedication to the endeavors of Med Chi.

Last year, under the leadership of Dr. Raymond Atkins, the Public Relations Committee initiated this program. Doctors and lawyers visit schools in their communities to talk with students about the medical and legal consequences of drug and alcohol use. To date, more than 345 classes have been visited and the program has been presented to over 10,380 students.

On behalf of the AMA, Dr. John Tupper, the President of the AMA, presented an award to Med Chi for its Doctor/Lawyer/Teacher Partnership Against Drugs Program. Accepting the award on behalf of Med Chi were Dr. Reynaldo Lee-Llacer; Dr. Raymond Atkins, Past President; Dr. Nakazawa; and Alan Rifkin of the Maryland Bar Association. Mr. Rifkin mentioned that he will turn the award over to Seymour Stern of the Maryland Bar Association who helped make this program successful.

The audience joined the President in a round of applause and appreciation for the combined efforts of literally dozens of physicians and lawyers who made this program a reality.

■ **11th Annual Photo Contest**

The Public Relations Committee sponsored Med Chi's 11th Annual Photo Contest. Faculty and Auxiliary members entered a total of thirty-three photos. The first place winner was David Paul MD and the second place winner was Michael Liteanu MD. The President presented the awards to the winners.

■ **Award for Excellence in Organized Medicine**

The Award for Excellence in Organized Medicine recognizes the contributions Maryland medical students make to organized medicine. The President presented two awards to two medical students: Elliot E. Casez from the University of Maryland School of Medicine and Martin J. Citardi from The Johns Hopkins School of Medicine.

■ **SeniorReach Partnership Award**

Senator Rosalie Abrams, Director, Maryland Office on Aging, presented a plaque to the Faculty highlighting its SeniorReach partnership on behalf of senior citizens of Maryland. The President accepted the award on behalf of Med Chi.

■ **Emeritus Membership**

Dr. Schneider, Chairperson of Council, moved to dispense with the reading of the list of emeritus members since the list was included on the agenda for the meeting. The motion was adopted.

On motion of Dr. Schneider, the following members, having received the recommendation of their component societies, were elected to emeritus membership:

— **Allegany County**

*Thomas D. Graff MD*

— **Anne Arundel County**

*Harvey R. Butt, Jr. MD*

*Jose Angel Palancar MD*

*Hewitt I. Varney MD*

— **Baltimore City**

*Daniel Bakal MD*

*Joseph R. Cowen MD*

*William A. Dear, Jr. MD*

*Francis M. Dugan MD*

*Earl P. Galleher, Jr. MD*

*Charles M. Henderson MD*

*James E. T. Hopkins MD*

*Nathan B. Hyman MD*

*Edward J. Kowalewski MD*

*Albert C. Montague MD*

*Alfred G. Ossman, Jr. MD*

*Homayoon Taavon MD*

*M. Lee Williams MD*

— **Baltimore County**

*John E. Carroll, Jr. MD*

*Donald S. Carter MD*

*Joseph C. Furnary MD*

*John E. Hoopes MD*

*Pelagio E. Layug MD*

*Morris Rainess MD*

*Kirkor Sekercan MD*

— **Carroll County**

*Augustin Chyu MD*

*Milton L. Engnoth MD*

— **Cecil County**

*Milton Ginsberg MD*

*Seymour Goldgraben MD*

— **Frederick County**

*Ching-Tai Kao MD*

*Thomas E. Stone MD*

— **Montgomery County**

*Howard N. Bernstein MD*

*Raymond Bradshaw MD*

*William H. Killay MD*

*John Lukasik MD*

*Eino Magi MD*

*B. William Murphy MD*

*June R. Pollack MD*

*Timothy J. Tehan MD*



*Chester L. Wagstaff MD      Arthur J. Wilets MD*  
*John M. Wyman MD*

—Prince George's County

*Richard H. Dobson MD      Arnold A. Filipowicz MD*  
*Rafael C. Lee MD*

—Washington County

*Harry Lai MD      John A. Moran MD*  
*Ralph H. Williams MD      Richard A. Young MD*

—Wicomico County

*Jose D. Soriano MD*

—Affiliate Members

*William B. Long, Jr. MD      George M. Simons MD*

■ Report of Council

Dr. Schneider, Chairperson of Council, summarized subjects addressed by the Executive Committee and Council during the 1990-91 operational year. Action was taken on more than sixty committee meeting minutes and reports. Med Chi, in coordination with the entire medical community, was able to either assist in passing favorable legislation or defeating undesirable legislation affecting public health, medical practice, and health care financing issues. Dr. Schneider mentioned that a full report highlighting Council and Executive Committee actions during the year would be available at the Friday House of Delegates meeting.

Some of the subjects mentioned by Dr. Schneider were: Health Access America, Medicaid and the Open Enrollment Program, No-Fault Insurance, Hospital Medical Bylaws and the Springfield Hospital Center issue, PRO Monitoring, Proper Referral of AIDS Patients, and Review of Healthcare Credentials Verification, Inc. application forms.

■ Treasurer's Report

Dr. Jose M. Yosuco, Treasurer, gave his report. He noted that a budget was attached to the agenda. No vote is required as the budget is presented for information only in accordance with instructions from the House of Delegates.

The auditor's statement for 1990 was accepted.

■ Board of Physician Quality Assurance

Dr. Ira Brecher, a member of the Board of Physician Quality Assurance (BPQA), reported on the activities of the BPQA and stated that the number of outstanding cases has dwindled.

■ Maryland Medical Political Action Committee

Dr. Fred Hatem reported that the Maryland Medical Political Action Committee (MMPAC) enjoyed a high level of success and influence last year and thanked Dr. Harold Bob for his help with the Committee. Dr. Hatem noted that 96 percent of the candidates supported by MMPAC won their races in the Maryland legislature. He mentioned that candidate support is central to MMPAC's existence and that political education is also important; both require funding. Dr. Hatem went on to state that only one-third of the House members are dues paying members at this time and asked that everyone join today. He also said he would be present on Friday to accept their \$100 dues.

■ Bylaws Committee

The President advised the members of the House that the "Consent Calendar" procedure would be used for the report of the Bylaws Committee. Following a review of the issues of the report by Kevin N. Hennessey MD, Chairperson of the Bylaws Committee, Items 3, 5 and 8 were extracted for discussion.

After discussion, it was decided to adopt Items 3 and 5. Item 8 was remanded back to the Bylaws Committee for further study.

Dr. Hennessey, on behalf of the Bylaws Committee, moved adoption of Bylaw amendments, Items 1, 2, 4, 6, and 7 of the report. These items were adopted as presented.

■ 1. Proposed Bylaw Amendment to the Med Chi Insurance Fund, Article X, Section 1 - ADOPTED

*Rationale* – To clarify verbiage in the bylaws.

*Amend Article X, Section 1*, as follows – [ ] indicate deletion; CAPS indicate change.

Section 1. – There shall be a Med Chi Insurance Fund composed of seven Directors and it shall have the powers and duties provided from time to time by the [Articles of Incorporation] MED CHI INSURANCE FUND BYLAWS and any amendments thereto.

■ 2. Proposed Bylaw Amendment to Finance Committee, Article X, Section 10 - ADOPTED

*Rationale* – To increase the size of the committee from five to seven members.

*Amend Article X, Section 11*, as follows – [ ] indicate deletion; CAPS indicate change.

Section 11. – A Finance Committee to advise and counsel the Treasurer regarding the Faculty's financial and investment program shall be [composed] COMPRISED of the Treasurer and [four] SIX other members, [one] TWO of whom shall be appointed by the President each year for a [four] THREE-year term. The President shall annually designate the Chairman of the committee.

■ **4. Proposed Bylaw Amendment to the PRO Monitoring Committee, Article XI, Section 29 - ADOPTED**

*Rationale* – To more accurately reflect the activities of the PRO Monitoring Committee by adding verbiage to allow the PRO Monitoring Committee to respond in a timely manner to inappropriate actions taken by the PRO (which has the contract with HCFA for the Maryland area) against physicians.

*Amend Article XI, Section 29, as follows* – [ ] indicate deletion; CAPS indicate change.

Section 29. – The PRO Monitoring Committee shall be appointed by the President. The President shall designate the Chairman. All members shall be chosen for their knowledge, experience, and interest in the activities of the Professional Review Organizations. The committee shall act as an analytical group to review the effect of programs carried out by the appropriate designated organization which has the contract with respect to the cost and quality of medical care. **THE COMMITTEE SHALL BE RESPONSIBLE FOR COMMUNICATING DIRECTLY WITH THE PRO IN INSTANCES WHERE THE COMMITTEE FINDS EVIDENCE THAT INAPPROPRIATE ACTION HAS BEEN TAKEN AGAINST PHYSICIANS RESULTING IN THE PRO ASCRIBING QUALITY POINTS AND/OR SANCTIONS.** The committee will also assist in providing informational and educational activities to such groups and individuals as may be appropriate, and advise other health care agencies on the issues of medical care quality.

■ **6. Proposed Bylaw Amendment to Ad Hoc Committee on Focused Professional Education, Article XI, Section 41 - ADOPTED**

*Rationale* – To redesignate this ad hoc committee to a standing committee.

*Amend Article XI, Section 41, as follows* – [ ] indicate deletion; CAPS indicate change.

**COMMITTEE ON FOCUSED PROFESSIONAL EDUCATION**  
**SECTION 41. – A COMMITTEE ON FOCUSED PROFESSIONAL EDUCATION, COMPRISED OF AT LEAST SIX MEMBERS, EACH OF WHOM SHALL BE APPOINTED BY THE PRESIDENT FOR A THREE-YEAR TERM ON A STAGGERED BASIS. THE PRESIDENT SHALL APPOINT THE CHAIRPERSON ANNUALLY FROM AMONG THE COMMITTEE MEMBERS. THE COMMITTEE SHALL PLAN, DEVELOP, AND COORDINATE EDUCATIONAL PROGRAMS SPECIFICALLY TO MEET THE NEEDS OF INDIVIDUAL PHYSICIANS. THE COMMITTEE'S PROGRAMS WILL FOCUS ON THE IDENTIFIED DEFICITS IN A PHYSICIAN'S PRACTICE, ASSESS THE PHYSICIAN'S NEEDS, ADDRESS THOSE NEEDS THROUGH SPECIFIC EDUCATIONAL ACTIVITIES INCLUDING INTERACTION WITH A PRECEPTOR, AND EVALUATE THE PROGRAM AT ITS CONCLUSION. THE COMMITTEE SHALL RECEIVE REFERRALS FROM THE BOARD OF PHYSICIAN QUALITY ASSURANCE OF PHYSICIANS WHO AS A RESULT OF THE PEER REVIEW PROCESS HAVE BEEN IDENTIFIED AS NEEDING EDUCATION; IT MAY RECEIVE REFERRALS FROM OTHER SOURCES SUCH AS THE FACULTY'S PHYSICIAN REHABILITA-**

**TION PROGRAM OR OTHER MEDICAL REVIEW ORGANIZATIONS. INDIVIDUAL PHYSICIANS MAY ENTER THIS FOCUSED EDUCATION PROGRAM EITHER ON A VOLUNTARY OR NONVOLUNTARY BASIS. PHYSICIANS ENTERING THIS PROGRAM MAY BE REQUIRED TO PAY EXPENSES ASSOCIATED WITH THE DEVELOPMENT OF THEIR SPECIFIC PROGRAM, COSTS ASSOCIATED WITH THE PRECEPTOR PROGRAM OR COSTS ASSOCIATED WITH HOSPITAL OR MEDICAL SCHOOL INVOLVEMENT.**

■ **7. Proposed Bylaw Amendment to Membership, Article II, Section 2 (c) - ADOPTED**

*Rationale* – To add that membership on the Focused Professional Education Committee be restricted to Med Chi members as is already established for the other peer review committees.

*Amend Article II, Section 2 (c), as follows* – [ ] indicate deletion; CAPS indicate change.

Section 2. – (c) Associate members all have the right to attend and participate in General Meetings; subscribe to the *Maryland Medical Journal*; have the privileges of the building, the reading room, the use of the books and to hold such meetings in the building as meet with the approval of the Executive Committee. They shall not have the right to vote or hold office in their component societies, but may be appointed to serve on committees of the Faculty, except the Committee on Physician/Patient Relations, the Committee on Peer Review, the Peer Review Management Committee, [and] the Committee on Drugs, **AND THE FOCUSED PROFESSIONAL EDUCATION COMMITTEE.** Those associate members who are Doctors of Medicine engaged in the clinical practice of medicine, shall have the right of physician's defense.

■ **3. Proposed Bylaw Amendment to Committee on Small Area Practice Variation, Article XI, Section 34 - ADOPTED**

*Rationale* – To delete as a standing committee. In the future, should the need for a specific study or studies occur, such studies may be submitted to an existing standing committee based on the subject of the study or to the Committee on Specialty Societies for inter-specialty coordination or the President may establish an ad hoc committee in accordance with existing bylaws.

*Amend Article XI, Section 34, as follows* – [ ] indicate deletion.

[Section 34. – A Committee on Small Area Practice Variation consisting of at least five members shall be appointed by the President. The President shall designate the Chairman. All members shall be chosen for their knowledge, experience and interest in small area analysis and medical practice variation. The committee shall act as an analytical group to review studies conducted by outside organizations and shall be authorized to conduct independent studies upon approval by the Executive Committee.]

A comment was made as to the rationale behind deletion of this Committee. The rationale contained in the report was clarified and no further discussion was made. The Chairperson of the



Bylaws Committee recommended this amendment for adoption and the Committee on Small Area Practice Variation was deleted.

■ **5. Proposed Bylaw Amendment to Music Medicine Clearinghouse Committee, Article XI, Section 40 - ADOPTED**

*Rationale* – To have editorial changes made to the Bylaws to reflect the new name and charge of the committee.

*Amend Article XI, Section 11, as follows* – [ ] indicate deletion; CAPS indicate change.

[Music Medicine Clearinghouse Committee]

[Section 40. – A Music Medicine Clearinghouse Committee of at least five members shall be appointed annually by the President to collect, organize, and disseminate information relating to the medical problems of musicians. The goal is to acquire original copies of books, journal articles, and other published materials in all languages, encompassing both traditional medical viewpoints and various alternative therapies. The collection will include items of rare or historical importance as well as archival materials. Clearinghouse information will be stored and organized so that it is available and useful to physicians, other health care professionals, musicians, educators, and researchers. Materials will be made available as widely as possible.]

COMMITTEE ON MEDICINE AND THE PERFORMING ARTS

SECTION 40. – A COMMITTEE ON MEDICINE AND THE PERFORMING ARTS, CONSISTING OF AT LEAST FIVE MEMBERS WHO SHALL BE APPOINTED BY THE PRESIDENT FOR A ONE-YEAR TERM, WILL STUDY THE ILLNESSES AND INJURIES TO WHICH PERFORMING ARTISTS ARE SUBJECT. FROM TIME TO TIME, THEY WILL REPORT ON THE MEDICAL ASPECTS OF SUCH CONDITIONS AND RECOMMEND PREVENTIVE AND PROTECTIVE ACTIONS THAT WILL BENEFIT THE ARTISTS AND THEIR PERFORMANCES. THE COMMITTEE ON MEDICINE AND THE PERFORMING ARTS WILL CONTINUE THE CLEARINGHOUSE ACTIVITIES THAT HAVE BEEN UNDERTAKEN BY THE MEDICAL AND CHIRURGICAL FACULTY. THE CLEARINGHOUSE, AN INTERNATIONALLY RECOGNIZED COLLECTION OF INFORMATION RELATING TO THE MEDICAL AND SURGICAL PROBLEMS OF MUSICIANS, WILL MAKE THESE RESOURCES AVAILABLE TO PHYSICIANS, MUSICIANS, EDUCATORS, AND RESEARCHERS. THE COMMITTEE WILL COOPERATE WITH OTHER GROUPS INTERESTED IN THE FUNCTIONAL PREPARATION OF ARTISTS, MAINTENANCE OF THEIR PHYSICAL SKILLS, AND REHABILITATION AFTER INJURY OR ILLNESS. THE PRESIDENT SHALL APPOINT THE CHAIRPERSON ANNUALLY.

A question was raised as to whether this Committee would only be concerned with problems of musicians or of participants in other performing arts as well (e.g., dancers). The Chairperson stated that the purpose of this Bylaws change was to insure such expansion. There was some discussion as to the need for this being a standing committee; however, no motion was made. The Bylaws Committee

Chairperson recommended adoption and the amendment was adopted as presented.

■ **8. Proposed Bylaw Amendment to Officers, Article IV, Section 6 - REMANDED TO COMMITTEE**

*Rationale* – To amend the current bylaws now requiring a delay of one year before certain elective officers assume the position to which elected. (Should this bylaw amendment be adopted by the House of Delegates it shall not take effect until the conclusion of the Annual Session 1993. Also, the Nominating Committee for 1992 will not consider nominees for the three Vice Presidents, Secretary, and Treasurer - these positions being filled by action of the 1991 Nominating Committee.)

*Amend Article IV, Section 6, as follows* – [ ] indicate deletion; CAPS indicate change.

Section 6. – Elective Officers except Councilors shall hold office for a term of one year or until their successors are elected. Councilors shall hold office for a term of three years, **PROVIDED THAT THEY MAY NOT SERVE MORE THAN TWO CONSECUTIVE TERMS.** [with the exception of] The representative of the Committee on Specialty Societies [who] shall serve for a term of one year, or until their successors are elected. [provided that they may not serve more than two consecutive terms.] Elective officers, except Councilors, shall assume their duties at the close of the annual session [one year after their election, except that the President shall assume that office at the close of the annual session] at which [he is] **THEY ARE** elected. Councilors in each newly elected annual class shall assume their duties at the close of the annual session immediately preceding which they were elected.

It was moved and adopted to remove this matter back to the Bylaws Committee because of its lack of clarity:

■ **Nominations**

The Chairperson of the Nominating Committee, Dr. Raymond Atkins, presented the list of nominees for House of Delegate offices as follows:

—**President-elect (1991-92)**

*Jose M. Yosuido MD, Baltimore City*

—**First Vice President (1992)**

*Gary L. Rosenberg MD, Baltimore City*

—**Second Vice President (1992)**

*Benjamin Maldonado MD, Prince George's County*

—**Third Vice President (1992)**

*Alex Azar MD, Wicomico County*

—**Secretary (1992)**

*Albert L. Blumberg MD, Baltimore County*

—**Treasurer (1992)**

*Lawrence H. Fink MD*, Montgomery County

—**Committee on Scientific Activity (1992-1998)**

*Esther Edery MD*, Baltimore County

—**Finney Fund Committee (1992-1997)**

*Daniel C. Finney*, Baltimore City

—**Delegates to the AMA**

*J. David Nagel MD*, Baltimore County

(January 1, 1992 - December 31, 1994)

*Marvin Schneider MD*, Montgomery County

(January 1, 1992 - December 31, 1994)

*Lawrence H. Fink MD*, Montgomery County

(January 1, 1992 - December 31, 1994)

—**Alternate Delegates to the AMA**

*Raymond M. Atkins MD*, Baltimore City

(January 1, 1992 - December 31, 1994)

*Alex Azar MD*, Wicomico County

(January 1, 1992 - December 31, 1994)

*Reynaldo L. Lee-Llacer MD*, Prince George's County

(January 1, 1992 - December 31, 1994)

*Clinton Leinweber MD*, Harford County (Resident)

(1991 Annual Meeting - December 31, 1992)

—**Board of Physician Quality Assurance**

(3 Vacancies - 4-Year Term, 6/30/91 - 6/30/95)

(1 Vacancy - Unexpired Term, to 6/30/92)

Faculty Bylaws require that a minimum of twice the number of nominees shall be submitted as there are seats to be filled.

*Reynaldo L. Lee-Llacer MD*, Prince George's County

*Francis C. Mayle MD*, Montgomery County

*Susan W. Owens MD*, Baltimore County

*K. George Dritsas MD*, Baltimore City

*Suresh C. Gupta MD*, Prince George's County

*Neil Novin MD*, Baltimore City

*Cheryl E. Winchell MD*, Montgomery County

*R. Marshall Ackerman MD*, Montgomery County

*Mary M. Newman MD*, Baltimore City

*Karakat S. Gokulanathan MD*, Prince George's County

After the Chairperson of the Nominating Committee presented the slate of nominees, Dr. Lee-Llacer asked if there were any further nominations. There were no further nominations from the floor for President-elect, First Vice President,

Second Vice President, Third Vice President, Secretary, Treasurer, Nominee for the Committee on Scientific Activity, three AMA alternate delegate positions, or the AMA (Resident) alternate delegate position. Therefore, the nominations for these positions were closed.

The nominee for the Finney Fund Committee was Dr. Daniel C. Finney. Since Dr. Finney is no longer a Med Chi member, Dr. Joseph H. Hooper (Baltimore City) was nominated for this slot. There were no other nominations for this position. The House approved this nomination.

The slate of nominees for the three positions of Delegates to the AMA included Drs. J. David Nagel, Marvin Schneider, and Lawrence H. Fink. Also nominated from the floor were Drs. Michael Dobridge, Joseph Snyder, and John H. Hebb.

Dr. Lee-Llacer stated that if there were no objection to all offices or positions not contested, the ballot will be dispensed with for those positions. Since no objection was heard, this was so ordered.

Dr. Lee-Llacer mentioned that ballots would be prepared for all contested positions and balloting would be by plurality vote on Friday, May 10. It was stated that plurality vote would be such that if more than three nominees were contesting three positions, unless there were objections, the three receiving the highest number of votes would be declared the winners. There were no objections and the plurality vote position was accepted.

The nominations to the Board of Physician Quality Assurance (BPQA) were then discussed. Dr. Atkins announced that Dr. Susan Owens had asked that her name be withdrawn. Dr. Lee-Llacer read the list of nominees as follows: Drs. Reynaldo L. Lee-Llacer, Francis C. Mayle, K. George Dritsas, Suresh C. Gupta, Neil Novin, Cheryl E. Winchell, R. Marshall Ackerman, Mary M. Newman, and Karakat S. Gokulanathan. Dr. Lee-Llacer asked if there were any other nominations from the floor. Nominated were Drs. Charles Hobelman, Jr., Murli N. Mathur, and J. Andrew Sumner. These additional nominations to the BPQA slate were approved by the House. The highest number of votes will be submitted to the Governor. Twice the number of names as vacancies must be submitted. Since there are four vacancies, eight names will be submitted. Voting will take place on Friday and the vote will be by plurality.

Dr. Lee-Llacer mentioned that following the House of Delegates meeting, the Committee Chairpersons would be presented with certificates of appreciation for work done during the year.

There being no further business, the meeting was adjourned at 1:30 pm.



# The experience of a nationwide laboratory.

Wouldn't it be great if you could enjoy all the advantages of a nationally—  
accredited testing laboratory—right here in your own neighborhood?

Well, now you can.

- The nation's largest full-service clinical laboratory network
- Over 25 years experience in laboratory toxicology
- Accredited by the College of American Pathologists (CAP)
- Licensed by the U.S. Department of Health and Human Services

- Local courier network works on your schedule around the clock

- 24-hour turnaround time on most routine tests

- Extensive internal quality control program ensures the accuracy you need to prescribe proper treatment for your patients

- A commitment to serve and serve well.



**SmithKline Beecham**  
*Clinical Laboratories*

*Maryland*

**800-729-7525**

# The convenience of a local lab.

## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Anne Salmon Barone, Ph.D., M.D.  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000

## PHYSICIANS

Do something different  
two days a month

Receive a commission  
in the Army National Guard

*The Army National Guard has immediate openings for physicians which require participation of only 2 days a month plus a 15-day Annual Training Period (a total of 39 days per year).*

### YOU WILL BE ELIGIBLE

- A COMMISSION IN THE ARMY NATIONAL GUARD
- AN EXCELLENT PART-TIME INCOME
- PAID ATTENDANCE AT:
  - CONTINUING MEDICAL EDUCATION COURSES
  - AMA CONFERENCES
  - KPUP (Active duty assignment up to 30 days in Europe, Asia and South America)
  - TRAINING AT U.S. ARMY HOSPITALS
- POST EXCHANGE & COMMISSARY
- MILITARY AIR TRAVEL WITHIN THE 50 STATES

### MARYLAND ARMY NATIONAL GUARD

PHIL HOWARD  
(301) 653-4618

610 Reisterstown Road, Pikesville, MD 21208



96% of patients  
don't ask about  
their medicines,<sup>1</sup>  
but 72% want more  
information.<sup>2</sup>

Don't disappoint them.

## Break the Rx Silence Barrier

Write for a free "Talk About  
Prescriptions" Month Guide  
containing "how-to" ideas and  
reproducible patient handouts to:

✠✠ The National Council on Patient  
Information and Education  
✠✠ 666 11th Street, NW, Suite 810  
Washington, D.C. 20001

<sup>1</sup> FDA survey, "Patient Receipt of Rx Drug Information", 1983

<sup>2</sup> A Study of Attitudes, Concerns, and Information Needs for Rx Drugs and Related Illnesses, CBS Television Network Consumer Model Survey, 1983



## Minutes of the Annual Session of the Med Chi House of Delegates (334th Meeting)

Medical and Chirurgical Faculty of Maryland  
May 10, 1991

The 334th meeting, second of the 193rd Annual Session of the House of Delegates of the Medical and Chirurgical Faculty, was held on Friday, May 10, 1991 at the University of Maryland, University College Center for Adult Education, College Park, Maryland.

Officers present were Reynaldo Lee-Llacer MD, President; Jose M. Yosuco MD, Treasurer; Marvin Schneider MD, Chairperson of the Council; Gary Rosenberg MD, Vice Chairperson; and J. David Nagel MD, President-elect. Also present but not on the podium was Lawrence H. Fink MD, Treasurer-elect.

The following delegates (or alternates) were registered as being in attendance; an asterisk (\*) next to a name denotes an alternate delegate.

### ■ Allegany County

Augusto F. Figueroa, Jr. MD

### ■ Anne Arundel County

Candace I. Chandler MD

David E. Matteson MD

### ■ Baltimore City

Timothy D. Baker MD  
Paul Burgan MD  
Augusto R. DeLeon MD  
Willarda V. Edwards MD  
Albert Folgueras MD\*  
Claude D. Hill MD  
Thomas E. Hunt MD  
Murray A. Kalish MD  
Samuel I. O'Mansky MD  
Jerome Ross MD  
J. Andrew Sumner MD  
Joseph W. Zebley MD

Anne Salmon Barone MD  
Gaylord L. Clark, Jr. MD  
K.G. Dritsas MD  
Ronald H. Fishbein MD  
Rafael C. Haciski MD  
Joseph H. Hooper MD  
Allan D. Jensen MD  
Donald W. Mintzer MD  
Stephen K. Padussis MD  
Bernard R. Shochet MD  
Karl H. Weaver MD

### ■ Baltimore County

Angelo A. Alecce MD\*  
Marianne Benkert MD  
John C. Gordon MD

William A. Anderson MD\*  
Yu-Wen Chang MD\*  
George H. Greenstein MD

Deusdedit Jolbitado MD  
John M. Krager MD  
Ronald Jay Orrell MD  
Arun B. Sapre MD  
Edward F. Wenzlaff MD  
Mehdi L. Yeganeh MD

Modesto S. Rivera MD

Henry J. Farkas MD

Krishan M. Mathur MD

Lewis M. Burdette MD

Gordon M. Smith MD\*

Ben Oteyza MD

Joyce M. Boyd MD

Jeffrey A. Abend MD  
Neil J. Barkin MD  
Lawrence H. Fink MD\*  
Barton J. Gershen MD  
Charles H. Ligon MD  
Bruce E. Rubin MD  
Mark S. Seigel MD  
Margaret T. Snow MD

Stuart J. Goodman MD  
Zorayda M. Lee-Llacer MD  
George S. Malouf, Sr. MD  
David N. Robb MD

Eva M. Smorzaniuk MD

Edward W. Ditto, III MD

Abraham M. Karr MD  
Herbert J. Levickas MD  
Scott M. Rifkin MD  
Margaret L. Sherrard MD  
H. Russell Wright, Jr. MD

### ■ Calvert County

### ■ Cecil County

### ■ Charles County

■ Dorchester County  
Paul A. Stagg MD

### ■ Frederick County

### ■ Harford County

■ Howard County  
Melvin S. Rapelyea MD

■ Montgomery County  
Benjamin Avrunin MD  
Carol L. Bender MD  
Joseph J. Genovese, Jr. MD  
Ira P. Krefting MD  
Edward S. Mehlman MD  
Philip L. Schneider MD  
Peter B. Sherer MD  
Vincent J. Vaghi MD

### ■ Prince George's County

John E. Jeffrey MD  
Mary B. Maloney MD  
Abdul Nayeem MD  
Frederick Wilhelm MD

### ■ Talbot County

### ■ Washington County



Past-president Raymond Atkins MD (l) and 1990-1991 President Reynaldo L. Lee-Llacer MD await the start of the Med Chi Council Meeting.

#### ■ Wicomico County

*James A. Cockey MD*

#### ■ Specialty Societies

*Maurice B. Furlong MD*

*Roman A. Goy MD*

#### ■ Board of Physician Quality Assurance

*John F. Strahan MD*

#### ■ Council

*Thomas E. Allen MD  
Alex Azar MD  
Louis C. Breschi MD  
Michael R. Dobridge MD  
Joseph S. Fastow MD  
Vincent D. Fitzpatrick MD  
Carol W. Garvey MD  
Susan R. Guarnieri MD  
Joseph H. Hooper MD  
Herbert H. Leighton MD  
Herman C. Maganzini MD  
Leslie R. Miles, Jr. MD  
Hiroshi Nakazawa MD  
Marvin Schneider MD  
Joseph Snyder MD  
Cheryl E. Winchell MD  
Jose M. Yosunico MD*

*Raymond M. Atkins MD  
Albert L. Blumberg MD  
Aurelio C. DeLaPaz MD  
Esther Edery MD  
Lawrence H. Fink MD  
Abdolhamid Ghiladi MD  
Nelson G. Goodman MD  
John H. Hebb MD  
Reynaldo L. Lee-Llacer MD  
Donald T. Lewers MD  
George S. Malouf, Sr. MD  
J. David Nagel MD  
Gary L. Rosenberg MD  
Roland T. Smoot MD  
Paul A. Staggs MD  
Jeffrey F. Witte MD*

*Members of the Faculty's staff were also present.*

**T**he meeting was called to order at 2:00 pm on Friday, May 10, 1991 by the President, Reynaldo Lee-Llacer MD.

#### ■ Introduction of Visitors

The President introduced visiting dignitaries as follows: Dr. John Owen, Jr. and his wife, Wanda, from the Virginia Medical Society; and Dr. William E. Ryan from the New Jersey Medical Society.

#### ■ Election

There being only one candidate for each office, the ballot was dispensed with by unanimous consent on Wednesday and the following were elected by voice vote:

*Jose M. Yosunico MD, President-elect  
Gary L. Rosenberg MD, First Vice President  
Benjamin Maldonado MD, Second Vice President  
Alex Azar MD, Third Vice President  
Albert L. Blumberg MD, Secretary  
Lawrence H. Fink MD, Treasurer  
Esther Edery MD, Committee on Scientific Activity  
Joseph H. Hooper MD, Finney Fund  
Raymond M. Atkins MD, Alternate Delegate AMA  
Alex Azar MD, Alternate Delegate AMA  
Reynaldo L. Lee-Llacer MD, Alternate Delegate AMA  
Clinton H. Leinweber MD, Alternate Delegate AMA  
(Resident)*

The next election was for Delegates to the American Medical Association (AMA). The nominees for the three positions were:

*Michael R. Dobridge MD  
Lawrence H. Fink MD  
John H. Hebb MD  
J. David Nagel MD  
Marvin Schneider MD  
Joseph Snyder MD*

A question was raised concerning the appropriateness of the plurality versus majority vote. Dr. Lee-Llacer reminded the House of Delegates that on Wednesday, May 8, the same issue had been raised and there had been no objection. Therefore, his position was to accept the view of the House meeting on Wednesday; the vote for AMA Delegates should be by plurality. Several other members rose, some supporting the plurality vote concept, others espousing a majority vote concept. The Chairperson turned the matter over to the Parliamentarian who

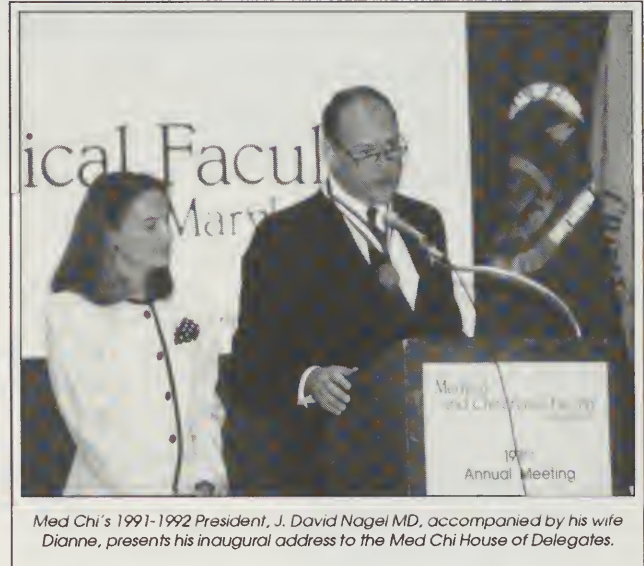


reiterated that the outcome of the Wednesday meeting was such that a plurality vote was appropriate in that the House addressed that issue and made that decision. Some members persisted and Dr. Lee-Llacer again discussed the issue with the Parliamentarian. He returned to the podium presenting his position that since there were numerous questions concerning the matter, the vote would be by majority vote. This position satisfied those present.

Dr. Lee-Llacer appointed tellers to distribute the ballots. Appointed were Dr. Paul Stagg, Chief Teller, and Drs. Fitzpatrick, Figuero, DeLeon, and Fastow.

The Chairperson stated that the nominees or persons wishing to speak on behalf of the nominees were allowed to speak for a period not to exceed two minutes. When all who wished to speak had concluded, the tellers distributed the ballots and the Chairperson inquired if everyone who wished to vote had voted. There were no objections to the ballots being taken away by the tellers. The tellers left the auditorium and completed the ballot count. After returning, the Chief Teller announced that two candidates for AMA Delegates had received a majority of the votes cast. Dr. Lee-Llacer announced that Drs. John H. Hebb and J. David Nagel won by a majority of the votes cast. He also announced that another ballot was needed since there were originally three vacant seats. At this time, Dr. Lawrence H. Fink requested the privilege of the floor. He stated he wished to withdraw his name as a candidate for the AMA Delegation. Several members of the House endorsed some of the remaining candidates for the last position. When all discussion was completed, the ballots for the second election were distributed. Once again, Dr. Lee-Llacer asked if all had voted who wished to vote; there were no requests for an extension of time. The tellers removed the ballots from the auditorium for the ballot count. Upon his return, Dr. Paul Stagg, Chief Teller, reported to the President that a third nominee had obtained a majority vote. Dr. Lee-Llacer announced that the third Delegate was Dr. Marvin Schneider. At this point, Dr. Michael Dobridge received the privilege of the floor. He thanked those present for their past support of him as a Delegate to the AMA. Dr. Joseph Snyder also thanked those present for their support for him.

Dr. Lawrence H. Fink requested the privilege of the floor. He stated that effective immediately, he was resigning from all offices of the Faculty and suggested that both Drs. Dobridge and Snyder do the same since they had not been endorsed by the Montgomery County Medical Society for the positions to which they had sought re-election. Also, inasmuch as the Montgomery County Medical



Society had not supported them, they should not have been asked to be placed on the ballot. At this point in time, Dr. Fink left the auditorium.

Dr. Lee-Llacer announced that the next item of business was the selection of eight nominees to be submitted to the Governor to fill positions on the Board of Physician Quality Assurance (BPQA). This ballot would be by a plurality vote. There were no challenges to the floor on this matter and Dr. Lee-Llacer announced the nominees. The nominees were:

- R. Marshall Ackerman MD*
- Raymond M. Atkins MD*
- K. George Dritsas MD*
- Karakat S. Gokulanathan MD*
- Suresh C. Gupta MD*
- Charles F. Hobelmann, Jr. MD*
- Reynaldo L. Lee-Llacer MD*
- Murli N. Mathur MD*
- Francis C. Mayle MD*
- Mary M. Newman MD*
- Neil Novin MD*
- James A. Sumner MD*
- Cheryl E. Winchell MD*

Ballots were handed out to the Delegates, collected, and counted. The Chairperson inquired if everyone who wished to vote had voted. Hearing no objection, the ballots were collected and the tellers left the auditorium for the ballot counting. The Chief Teller gave the results of the ballot to

the Chairperson who announced the names of the eight names to be submitted:

*R. Marshall Ackerman MD*

*Raymond M. Atkins MD*

*K. George Dritsas MD*

*Charles F. Hobelman, Jr. MD*

*Reynaldo L. Lee-Llacer MD*

*Francis C. Mayle MD*

*Mary M. Newman MD*

*Cheryl E. Winchell MD*

### ■ Dr. Raymond Scalletar

The President asked Dr. Ray Scalletar, a member of the Board of Trustees of the AMA and a member of the District of Columbia Medical Society to come forward. Dr. Lee-Llacer, on behalf of all members of the Medical and Chirurgical Faculty, stated that he was honored to present a Certificate of Appreciation to Dr. Scalletar for his personal efforts and the assistance he provided in ensuring compliance with hospital medical staff bylaw standards of the Joint Commission on Accreditation of Healthcare Organizations. The standards require the active participation of the hospital medical staff in the development of the hospital medical staff bylaws.

Dr. Scalletar spoke briefly, offering his sincerest appreciation for the opportunity to be present and to be heard by the House of Delegates of the Med Chi Faculty.

### ■ The Honorable Steny Hoyer

The President introduced Congressman Steny Hoyer to the House of Delegates as one who could always be counted on to support physicians. Congressman Hoyer spoke about the issues facing medicine and Congress in the 1990s. His speech was loudly applauded by the House of Delegates. After his presentation, Dr. Reynaldo Lee-Llacer presented Congressman Hoyer with a Med Chi Certificate of Achievement for all his past work.

### ■ Auxiliary Report

Dr. Lee-Llacer recognized Mrs. Josefina Figueroa, President of the Auxiliary, who gave the Auxiliary report. She highlighted several of the projects carried out by component auxiliaries and thanked the House of Delegates for its continued support.

### ■ MMPAC

Dr. J. David Nagel spoke on behalf of Dr. Fred Hatem, spokesperson for MMPAC. He reiterated the importance of joining MMPAC and stated that staff would be available to accept checks from anyone who wished to join today.

### ■ Announcement

The President noted that the Council will meet immediately following the adjournment of the House of Delegates for the purposes of electing a Chairperson and Vice Chairperson, and the transaction of other business that may properly come before it.

### ■ President's Farewell Speech

The outgoing President, Reynaldo L. Lee-Llacer MD, addressed the House. He asked for a moment of silence in honor of all Americans who served and lost their lives in the Persian Gulf war and paid tribute to all Maryland physicians who were called to action in Operation Desert Storm. He mentioned that the highest service any person can provide is to protect the life of another human being. Dr. Lee-Llacer closed by sharing a prayer of Maimonides and thanked the House for the opportunity to serve as President.

### ■ Change of Presidency

The Chairperson then asked the incoming President, J. David Nagel MD, and his wife, Dianne, to step forward. The oath of office for the President of the Medical and Chirurgical Faculty of Maryland was administered. Dr. Nagel was presented with the President's Medallion, which is to be worn when he visits other states, as well as during official ceremonies of Med Chi.

Dr. Nagel then presented the Past President's Medallion to Dr. Lee-Llacer. Dr. Lee-Llacer, in turn, presented Dr. Nagel with the gavel signifying the change in the presidency. Dr. Nagel addressed the House and called for a commitment on behalf of all of the members, asking all the members to become more involved with the practice of medicine and within the Med Chi committee structure. At the conclusion of his presentation, the House gave both Dr. Lee-Llacer and Dr. Nagel a standing ovation.

### ■ Adjournment

There being no further business, the meeting was adjourned *sine die* at 4:00 pm.



# COMING OUT OF THE DARK

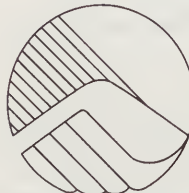
Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians, with a confidential and nondisciplinary focus...Addiction, Marital/Family Conflicts, Psychiatric Illness, Organic Impairment, Physical Handicap...If these problems exist, we can help find the solution. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families.

The Committee is NONDISCIPLINARY and information is kept CONFIDENTIAL. If you, a colleague, or family member is in need of our services call (301)962-5580 or call toll free (800)992-7010, or leave a message 24 hours a day, 7 days a week at (301)727-1020.

*HELPING IS OUR BUSINESS...All donations to the Physician Rehabilitation Committee are used for the delivery of services to Maryland physicians in need of help. If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation, 1204 Maryland Avenue, Baltimore, Maryland 21201 Please note on your donation: "Physician Rehab"*

Medical  
and Chirurgical Faculty  
of Maryland



**Physician  
Rehabilitation  
Committee**





# Meet the new team in town.

Maryland General Hospital of Baltimore has teamed up with Bryn Mawr Rehab of Malvern, Pennsylvania, one of the premier physical medicine and rehabilitation facilities in the country to form *Maryland General-Bryn Mawr Rehab Center*.

The new center, staffed by 50 of the finest rehab physicians, therapists, nurses and clinical specialists in the area, will offer the highest quality, comprehensive inpatient and outpatient rehabilitation services.

*Maryland General-Bryn Mawr Rehab Center* features 33 inpatient rehab beds with 15 devoted

to brain injured patients and 18 designated for orthopedic and neurological rehabilitation. Outpatient services are available at the Maryland General Campus in Baltimore and at our satellite health care centers in the neighboring communities of Catonsville and Timonium.

We invite you to meet the new team in town. Call Mary Filippelli, our Administrative Director at (301) 225-8380 to get all the details and to arrange for a tour of our new facility.

*Maryland General-Bryn Mawr Rehab Center.* When it comes to rehab care, we're strictly major league.

 **MARYLAND GENERAL  
BRYN MAWR REHAB CENTER**

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380



## Committee on AIDS

*Mr. President and Members of the House of Delegates:*

**T**he Committee on AIDS had a very productive year during 1990-1991. It was responsible for the enactment of several new Med Chi policies and programs dealing with AIDS and HIV infection, and also encouraged new State laws on the disease.

In July, the Committee identified three subjects as initial goals for the Committee: (1) to improve screening for HIV infection; (2) to improve access and treatment for HIV infected people; and (3) to eliminate discrimination of persons with AIDS in Maryland.

### ■ HIV and AIDS Legislation

To improve screening for HIV infection, the Committee agreed to encourage Med Chi to lobby for and propose legislation expanding HIV testing laws in Maryland. The Committee worked in conjunction with the Legislative Committee and Med Chi's lobbyist to develop draft legislation requiring individuals who serve as the source of significant exposure to health care workers to be tested for HIV. Introduced by Senator Murphy as Senate Bill 156, this legislation would have provided for mandated testing of patients when there had been a significant exposure between that patient and a health care worker. SB 156 did not pass.

The Committee also supported Senator Hollinger's HIV health care providers bill, SB 203. This legislation was passed during the 1991 session and signed by Governor Schaefer in May. SB 203 differs from SB 156 in that it requires informed consent prior to the testing of patients. The bill is based on the premise that 90 percent of all those who are requested to take an HIV test will give consent. Of the remaining ten percent, seven to eight percent will have either died or become incompetent or comatose and will, therefore, be unable to give informed consent. For those individuals, SB 203 allows for substitute consent. The bill also includes an amendment requiring Med Chi to consult with the Centers for Disease Control, the Maryland AIDS Administration, and the Maryland Hospital Association to develop practice protocols for health care workers infected with HIV. The protocols are to be submitted to the Legislature on December 2, 1991.

The Committee also supported SB 97, a bill repealing a requirement for laboratories to report HIV results to the State Health Department. Under current law, both physicians and medical labs report HIV test results which lead to duplicate information. This bill was signed into law in May 1991.

Several Committee members represented Med Chi before the Governor's Council on AIDS and testified before the Legislature this Session.

### ■ Faculty Position Paper on AIDS

In February 1991, Med Chi's Executive Committee accepted the Committee's revisions to the Faculty Position on AIDS, establishing a formal position on the following topics:

- education, prevention, and treatment programs;
- discrimination;
- protection of health care workers and patients;
- refusal of treatment because of a positive HIV antibody test;
- mandatory reporting; and
- access to care.

Under the new Faculty Position, Med Chi supports legislation for mandatory testing of individuals who serve as sources of significant HIV exposure for health care workers. The Faculty Position maintains that "Similar testing of health care workers and patients should be done when a significant exposure has taken place between the health care worker and the patient in order to protect the patient." In addition, the Faculty Position states, "Physicians who are aware of their HIV positive status have an ethical responsibility to report their HIV status appropriately."

### ■ Access to Care

The new Faculty Position includes a section entitled, "Access to Care," that attempts to fulfill the Committee's second goal for 1990-1991:

- The allocation of funds for AIDS care severely limits reimbursement rates for professional services at a time when increasing numbers of physicians are needed to care for patients with HIV infection. This has a negative impact on the care of economically disadvantaged persons including an increasing number of intravenous drug users with HIV infection. Med Chi encourages adequate funding of care that will provide for management of HIV infection at all stages of the disease.

Committee members met with representatives from the Maryland Medical Assistance Program in an effort to solve this problem.

In addition, Vice Chairman John G. Bartlett MD conducted studies on drug costs and social work issues for HIV patients in an effort to improve treatment for these patients.

Dr. Bartlett presented the results of a study of various drug regimens and their cost to HIV patients. He concluded that

using less costly drug therapies for HIV patients results in substantial savings without sacrificing quality of care. The Committee hopes to present the results of this study to the Maryland AIDS Administration for its consideration and comments.

In his examination of social work issues, Dr. Bartlett presented a paper examining various social work problems for AIDS patients at The Johns Hopkins Hospital. The paper illustrated the variety of barriers many AIDS patients confront before receiving the special social work assistance they require. Dr. Bartlett also observed that many of the barriers to social work help are unnecessary or avoidable. The Committee hopes to work with the Department of Social Services and the AIDS Administration in order to alleviate these problems for patients.

#### ■ Education

In May 1991, the Committee presented a session during the Med Chi Annual Meeting, "HIV Today: Testing, Transmission and Treatment."

Panel speakers included:

- Committee Vice Chairman John G. Bartlett MD who spoke on "Interpretation of HIV Tests";
- Baltimore Academy of Surgeons President Thomas R. Gadacz MD who described the "Risk of HIV Transmission from Health Care Workers to Patients";
- David Henderson MD, Associate Director of Quality Assurance and Hospital Epidemiology for the National Institutes of Health, who explored ways to "Control HIV Transmission in Hospitals"; and
- Henry Masur MD, Chief of Critical Care Medicine for the National Institutes of Health, who spoke on "New Aspects in AIDS Treatment."

The Committee on AIDS looks forward to the coming year and thanks the membership and leadership of Med Chi for their support. As Chairperson, I thank all the members of my Committee who have helped make this a productive and successful year.

*Fred A. Gil MD, Chairperson*

*John G. Bartlett MD, Vice Chairperson*

*Carla S. Alexander MD*

*Randy S. Berger MD*

*Stanley L. Blum MD*

*Alfred W. Forrester MD*

*Katherine S. Harrison MD*

*P.G. Rausch MD*

*Phuong D. Trinh MD*

*Robert J. Ancona MD*

*Willie C. Blair MD*

*John C. Downs MD*

*Andrew P. Fridberg MD*

*John M. Henderson MD*

*Margaret T. Snow MD*

*Daniel C. Wilkerson MD*

#### Advisory Members

*Kathleen F. Edwards PhD, RN*

*Joyce Harper MD*

*Eric Fine MD*

*Carmine M. Valente PhD*

## Committee on Alcoholism and Chemical Dependency

*Mr. President and Members of the House of Delegates:*

**T**he Committee on Alcoholism and Chemical Dependency continued its efforts toward raising awareness of the dangers of alcohol and substance abuse, including smoking.

The Committee presented two resolutions to Council: the banning of cigarette vending machines, and the banning of tobacco product advertising at the Stadium. The resolutions, aimed at reducing the consumption of tobacco products by youths, were approved by Council. Unfortunately, they were defeated in the 1991 State Legislature.

The Committee supported legislation to increase the excise tax on the sale of tobacco products in Maryland. The bill was passed by the State Legislature.

In concert with the Committee on Drugs and the Physician Rehabilitation Committee, the Committee on Alcoholism and Chemical Dependency sponsored a highly successful two-day conference, "Practical Clinical Management: Drug Abuse Education for the Primary Care Physician," which took place on October 20 and 21, 1990.

The Committee also cosponsored the presentation, "Drug Utilization Review," at Med Chi's 193rd Annual Meeting. The presentation, given by Richard D. Baylis PharmD, Director, Maryland Pharmacy Association, was well-received.

The Committee continues to work diligently to address a wide range of concerns about substance abuse. As the year ends, the Committee is in the process of working on supporting the recognition of Addiction Medicine as a Board Certified Specialty and is looking forward to sponsoring workshops on training physicians in smoking cessation techniques. The Committee is also planning to cosponsor another drug conference in the fall of 1991.

I wish to thank the Faculty, the Committee members, and the staff for their assistance and support this past year.

*Franklin T. Evans MD, Chairperson*

*Claude R. Feinstein MD*

*John H. Hirschfeld MD*

*Beatrice L. Selvin MD*

*N. Joseph Gagliardi MD*

*Abraham M. Schneidmuhl MD*

*Bruce T. Taylor MD*

#### Advisory Members

*Arthur MacNeill Horton, Jr. EdD*

*Patricia Lancelotta RN*

*Mr. Phil McKenna*

*Walter P. Pidgeon, Jr. CAE*

*Isadore Kaplan MD*

*Mr. Ludwig L. Lankford*

*Philip P. Nolan DDS*



## Bylaws Committee

*Mr. President and Members of the House of Delegates:*

**A**t the Semiannual Meeting, September 15, 1990, the Bylaws Committee recommended the following bylaw amendments to the House of Delegates for its consideration:

### ■ 1. Proposed Bylaw Amendment to the Ad Hoc Music Medicine Clearinghouse Committee

*Rationale* — To change the status of the Ad Hoc Music Medicine Clearinghouse Committee to make it a standing committee of the Faculty.

*Amend By Addition of Article XI, Section 40, as follows* — [ ] indicate deletion; CAPS indicate change.

SECTION 40. — A MUSIC MEDICINE CLEARINGHOUSE COMMITTEE OF AT LEAST FIVE MEMBERS SHALL BE APPOINTED ANNUALLY BY THE PRESIDENT TO COLLECT, ORGANIZE, AND DISSEMINATE INFORMATION RELATING TO THE MEDICAL PROBLEMS OF MUSICIANS. THE GOAL IS TO ACQUIRE ORIGINAL COPIES OF BOOKS, JOURNAL ARTICLES, AND OTHER PUBLISHED MATERIALS IN ALL LANGUAGES, ENCOMPASSING BOTH TRADITIONAL MEDICAL VIEWPOINTS AND VARIOUS ALTERNATIVE THERAPIES. THE COLLECTION WILL INCLUDE ITEMS OF RARE OR HISTORICAL IMPORTANCE AS WELL AS ARCHIVAL MATERIALS. CLEARINGHOUSE INFORMATION WILL BE STORED AND ORGANIZED SO THAT IT IS AVAILABLE AND USEFUL TO PHYSICIANS, OTHER HEALTH CARE PROFESSIONALS, MUSICIANS, EDUCATORS, AND RESEARCHERS. MATERIALS WILL BE MADE AVAILABLE AS WIDELY AS POSSIBLE.

The Bylaws Committee recommended adoption of this proposed amendment.

### ■ 2. Proposed Bylaw Amendment to the Committee on Drugs, Article XI, Section 7

*Rationale* — To establish staggered terms of office for appointed members of the committee.

*Amend Article XI, Section 7, as follows* — [ ] indicate deletion; CAPS indicate change.

Section 7. — A Committee on Drugs of at least five members WHO SHALL SERVE ON A THREE-YEAR STAGGERED TERM BASIS. THE PRESIDENT SHALL SELECT ONE-THIRD OF ITS MEMBERS EACH YEAR FOR A THREE-YEAR TERM. THE PRESIDENT WILL ALSO APPOINT THE CHAIRMAN. THE COMMITTEE shall be responsible for evaluating the appropriateness of prescribing controlled dangerous drugs and shall work closely with appropriate governmental authorities in controlling the abuse of controlled dangerous substances by physicians and be alert to legislative

and regulatory proposals regarding prescription drugs, standing ready to provide expertise in this area to such agencies or groups as request it; may provide educational material in the form of lectures and other didactic information on the current knowledge concerning prescribing controlled substances; may provide support and advice to the Department of Health and Mental Hygiene to urge that there are adequate facilities available 24 hours a day to treat all of the victims, both professional and otherwise, of drug abuse and its complications. [Its chairman and members shall be appointed annually by the President.]

The Bylaws Committee recommended adoption of this proposed amendment.

### ■ 3. Proposed Bylaw Amendment to Physician/Patient Relations Committee, Article XI, Section 25

*Rationale* — To establish staggered terms of office for appointed members of the committee.

*Amend Article XI, Section 25, as shown below* — [ ] indicate deletion; CAPS indicate change.

Section 25. — A Physician/Patient Relations Committee composed of at least nine members WHO SHALL SERVE ON A THREE-YEAR STAGGERED TERM BASIS. THE PRESIDENT SHALL SELECT ONE-THIRD OF ITS MEMBERS EACH YEAR FOR A THREE-YEAR TERM. THE PRESIDENT WILL ALSO APPOINT THE CHAIRMAN. THE COMMITTEE shall hear and determine all grievances or complaints growing out of the practice of medicine as provided by these bylaws and mediate all problems involving or growing out of the practice of medicine. [The chairman shall be appointed by the President.]

The Bylaws Committee recommended adoption of this proposed amendment.

### ■ 4. Proposed Bylaw Amendment to the Peer Review Management Committee, Article XI, Section 24

*Rationale* — To establish staggered terms of office for appointed members of the committee.

*Amend Article XI, Section 24, Peer Review Management Committee, as follows* — [ ] indicate deletion; CAPS indicate change.

Section 24. — A Peer Review Management Committee (PRMC) shall consist of not less than nine members WHO SHALL SERVE ON A THREE-YEAR STAGGERED TERM BASIS and be selected from nominees submitted by component societies. Appointments shall be based on the nominees' experience on the medical review committee. [The chairman and members shall be appointed by the President.] THE PRESIDENT SHALL SELECT ONE-THIRD OF ITS MEMBERS EACH YEAR FOR A THREE-YEAR TERM. THE PRESIDENT WILL ALSO APPOINT THE CHAIRMAN. The Chairman or his designee may serve in an ex-officio capacity on the Board of Physician Quality Assurance. It shall be the duty of the committee to receive and record cases referred by the Board of Physician Quality Assurance; to identify the guidelines to be used in conducting reviews; refer cases to the appropriate Med Chi committee, component, specialty society or regional commit-

tee; to monitor the status of each case; to review reports received from investigating committees to determine adequacy of the review and the report and either transmit the report to the Board of Physician Quality Assurance or return it to the investigating committee with any inadequacies specified. Further, it shall be the duty of this committee to provide educational programs throughout Maryland to emphasize the elements of peer review; to provide organizational assistance to any review committee in Maryland; and to gather, analyze, and report statistical information annually for use by the Board of Physician Quality Assurance, Med Chi, and component societies in evaluating and upgrading the peer review process.

The Bylaws Committee recommended adoption of this proposed amendment.

## ■ 5. Proposed Bylaw Amendment to the House of Delegates, Article VI, Section 2

*Rationale* — To delete for clarification of language.

*Amend Article VI, Section 2*, as follows — [ ] indicate deletion.

Section 2. -- Regular meetings of the House of Delegates shall be held during the annual and semiannual sessions. At the annual session it shall meet on the opening day and at any session it may adjourn to meet from time to time as it may deem necessary, provided that its meetings shall conflict as little as possible with General Meetings. Special sessions may be called by the President [of the Council] and shall be called on the written request of 50 Delegates.

The Bylaws Committee recommended adoption of this proposed bylaw amendment.

**A**t the May 1991 Annual Meeting, the Bylaws Committee recommended the following bylaw amendments to the House of Delegates for its consideration:

## ■ 1. Proposed Bylaw Amendment to the Med Chi Insurance Fund, Article X, Section 1

*Rationale* — To clarify verbiage in the bylaws.

*Amend Article X, Section 1*, as follows — [ ] indicate deletion; CAPS indicate change.

Section 1. — There shall be a Med Chi Insurance Fund composed of seven Directors and it shall have the powers and duties provided from time to time by the [Articles of Incorporation] MED CHI INSURANCE FUND BYLAWS and any amendments thereto.

The Bylaws Committee recommended adoption of this proposed amendment.

## ■ 2. Proposed Bylaw Amendment to Finance Committee, Article XI, Section 10

*Rationale* — To increase the size of the committee from five to seven members.

*Amend Article X, Section 11*, as follows — [ ] indicate deletion; CAPS indicate change.

Section 11. — A Finance Committee to advise and counsel the Treasurer regarding the Faculty's financial and investment program shall be [composed] COMPRISED of the Treasurer and [four] SIX other members, [one] TWO of whom shall be appointed by the President each year for a [four] THREE-year term. The President shall annually designate the Chairman of the committee.

The Bylaws Committee recommended adoption of this proposed amendment.

## ■ 3. Proposed Bylaw Amendment to Committee on Small Area Practice Variation, Article XI, Section 34

*Rationale* — To delete as a standing committee. In the future, should the need for a specific study or studies occur, such studies may be submitted to an existing standing committee based on the subject of the study or to the Committee on Specialty Societies for inter-specialty coordination, or the President may establish an ad hoc committee in accordance with existing bylaws.

*Amend Article XI, Section 34*, as follows — [ ] indicate deletion.

[Section 34. — A Committee on Small Area Practice Variation consisting of at least five members shall be appointed by the President. The President shall designate the Chairman. All members shall be chosen for their knowledge, experience and interest in small area analysis and medical practice variation. The committee shall act as an analytical group to review studies



Presidential Banquet receiving line (l to r):

Angelo J. Troisi FACHE, Terry Troisi, Ernest E. Harmon MD, Elsie Harmon, Dianne Nagel, J. David Nagel MD, Josefina D. Figueroa, Zorayda Meneses Lee-Llacer MD, Reynaldo L. Lee-Llacer MD, Augusto Figueroa MD.



conducted by outside organizations and shall be authorized to conduct independent studies upon approval by the Executive Committee.]

The Bylaws Committee recommended deletion of Article XI, Section 34.

## ■ 4. Proposed Bylaw Amendment to the PRO Monitoring Committee Article XI, Section 29

*Rationale* — To more accurately reflect the activities of the Professional Review Organization (PRO) Monitoring Committee by adding verbiage to allow the PRO Monitoring Committee to respond in a timely manner to inappropriate actions taken by the PRO (which has the contract with the Health Care Financing Administration (HCFA) for the Maryland area) against physicians.

*Amend Article XI, Section 29*, as follows — CAPS indicate change.

Section 29. — The PRO Monitoring Committee shall be appointed by the President. The President shall designate the Chairman. All members shall be chosen for their knowledge, experience, and interest in the activities of the Professional Review Organizations. The committee shall act as an analytical group to review the effect of programs carried out by the appropriate designated organization which has the contract with respect to the cost and quality of medical care. THE COMMITTEE SHALL BE RESPONSIBLE FOR COMMUNICATING DIRECTLY WITH THE PRO IN INSTANCES WHERE THE COMMITTEE FINDS EVIDENCE THAT INAPPROPRIATE ACTION HAS BEEN TAKEN AGAINST PHYSICIANS RESULTING IN THE PRO ASCRIBING QUALITY POINTS AND/OR SANCTIONS. The committee will also assist in providing informational and educational activities to such groups and individuals as may be appropriate, and advise other health care agencies on the issues of medical care quality.

The Bylaws Committee recommended adoption of this proposed amendment.

## ■ 5. Proposed Bylaw Amendment to Music Medicine Clearinghouse Committee, Article XI, Section 40

*Rationale* — To have editorial changes made to the Bylaws to reflect the new name and charge of the committee.

*Amend Article XI, Section 11*, as follows — [ ] indicate deletion; CAPS indicate change.

[Music Medicine Clearinghouse Committee]

[Section 40. — A Music Medicine Clearinghouse Committee of at least five members shall be appointed annually by the President to collect, organize, and disseminate information relating to the medical problems of musicians. The goal is to acquire original copies of books, journal articles, and other published materials in all languages, encompassing both traditional medical viewpoints and various alternative therapies. The collection will include items of rare or historical importance as well as archival materials. Clearinghouse information will be stored and organized so that it is available and useful to physicians, other health care professionals, musicians, educators, and researchers. Materials will be made available as widely as possible.]

COMMITTEE ON MEDICINE AND THE PERFORMING ARTS  
SECTION 40. A COMMITTEE ON MEDICINE AND THE PERFORMING ARTS, CONSISTING OF AT LEAST FIVE MEMBERS WHO SHALL BE APPOINTED BY THE PRESIDENT FOR A ONE-YEAR TERM, WILL STUDY THE ILLNESSES AND INJURIES TO WHICH PERFORMING ARTISTS ARE SUBJECT. FROM TIME TO TIME THEY WILL REPORT ON THE MEDICAL ASPECTS OF SUCH CONDITIONS AND RECOMMEND PREVENTIVE AND PROTECTIVE ACTIONS THAT WILL BENEFIT THE ARTISTS AND THEIR PERFORMANCES. THE COMMITTEE ON MEDICINE AND THE PERFORMING ARTS WILL CONTINUE THE CLEARINGHOUSE ACTIVITIES THAT HAVE BEEN UNDERTAKEN BY THE MEDICAL AND SURGICAL FACULTY. THE CLEARINGHOUSE, AN INTERNATIONALLY RECOGNIZED COLLECTION OF INFORMATION RELATING TO THE MEDICAL AND SURGICAL PROBLEMS OF MUSICIANS, WILL MAKE THESE RESOURCES AVAILABLE TO PHYSICIANS, MUSICIANS, EDUCATORS, AND RESEARCHERS. THE COMMITTEE WILL COOPERATE WITH OTHER GROUPS INTERESTED IN THE FUNCTIONAL PREPARATION OF ARTISTS, MAINTENANCE OF THEIR PHYSICAL SKILLS, AND REHABILITATION AFTER INJURY OR ILLNESS. THE PRESIDENT SHALL APPOINT THE CHAIRPERSON ANNUALLY.

The Bylaws Committee recommended adoption of this proposed amendment.

## ■ 6. Proposed Bylaw Amendment to Ad Hoc Committee on Focused Professional Education, Article XI, Section 41

*Rationale* — To redesignate this ad hoc committee to a standing committee.

*Amend Article XI, Section 41*, as follows — CAPS indicate change.

COMMITTEE ON FOCUSED PROFESSIONAL EDUCATION  
SECTION 41. — A COMMITTEE ON FOCUSED PROFESSIONAL EDUCATION, COMPRISED OF AT LEAST SIX MEMBERS, EACH OF WHOM SHALL BE APPOINTED BY THE PRESIDENT FOR A THREE-YEAR TERM ON A STAGGERED BASIS. THE PRESIDENT SHALL APPOINT THE CHAIRPERSON ANNUALLY FROM AMONG THE COMMITTEE MEMBERS. THE COMMITTEE SHALL PLAN, DEVELOP, AND COORDINATE EDUCATIONAL PROGRAMS SPECIFICALLY TO MEET THE NEEDS OF INDIVIDUAL PHYSICIANS. THE COMMITTEE'S PROGRAMS WILL FOCUS ON THE IDENTIFIED DEFICITS IN A PHYSICIAN'S PRACTICE, ASSESS THE PHYSICIAN'S NEEDS, ADDRESS THOSE NEEDS THROUGH SPECIFIC EDUCATIONAL ACTIVITIES INCLUDING INTERACTION WITH A PRECEPTOR, AND EVALUATE THE PROGRAM AT ITS CONCLUSION. THE COMMITTEE SHALL RECEIVE REFERRALS FROM THE BOARD OF PHYSICIAN QUALITY ASSURANCE OF PHYSICIANS WHO AS A RESULT OF THE PEER REVIEW PROCESS HAVE BEEN IDENTIFIED AS NEEDING EDUCATION; IT MAY RECEIVE REFERRALS FROM OTHER SOURCES SUCH AS THE FACULTY'S PHYSICIAN REHABILITATION PROGRAM OR OTHER MEDICAL REVIEW ORGANIZATIONS. INDIVIDUAL PHYSICIANS MAY ENTER THIS FOCUSED EDUCATION PROGRAM EITHER ON A VOLUNTARY OR NON-VOLUNTARY BASIS. PHYSICIANS ENTERING THIS

PROGRAM MAY BE REQUIRED TO PAY EXPENSES ASSOCIATED WITH THE DEVELOPMENT OF THEIR SPECIFIC PROGRAM, COSTS ASSOCIATED WITH THE PRECEPTOR PROGRAM OR COSTS ASSOCIATED WITH HOSPITAL OR MEDICAL SCHOOL INVOLVEMENT.

The Bylaws Committee recommended adoption of this proposed amendment.

■ **7. Proposed Bylaw Amendment to Membership, Article II, Section 2 (c)**

**Rationale** — To add that membership on the Focused Professional Education Committee be restricted to Med Chi members as is already established for the other peer review committees.

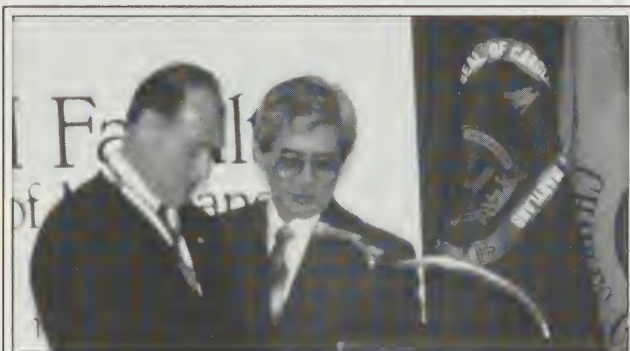
**Amend Article II, Section 2 (c)**, as follows — [ ] indicate deletion; CAPS indicate change.

Section 2. — (c) Associate members all have the right to attend and participate in General Meetings; subscribe to the *Maryland Medical Journal*; have the privileges of the building, the reading room, the use of the books and to hold such meetings in the building as meet with the approval of the Executive Committee. They shall not have the right to vote or hold office in their component societies, but may be appointed to serve on committees of the Faculty, except the Committee on Physician/Patient Relations, the Committee on Peer Review, the Peer Review Management Committee, [and] the Committee on Drugs, AND THE FOCUSED PROFESSIONAL EDUCATION COMMITTEE. Those associate members who are Doctors of Medicine engaged in the clinical practice of medicine, shall have the right of physician's defense.

The Bylaws Committee recommended adoption of this proposed amendment.

This concludes the report of the Bylaws Committee.

*Kevin N. Hennessey MD*, Chairperson, Prince George's County  
*Henry P. Laughlin MD, ScD, ScSD*, Frederick County  
*Marianne Benkert MD*, Baltimore County  
*Karl H. Weaver MD*, Baltimore City  
*Emidio A. Bianco MD*, Howard County  
*Ben Oteyza MD*, Harford County  
*Cheryl E. Winchell MD*, Montgomery County



Reynaldo L. Lee-Llacer MD (r) presents J. David Nagel MD with the Med Chi President's Medallion.

## Computers in Medicine Committee

*Mr. President and Members of the House of Delegates:*

The Computers in Medicine Committee held several meetings throughout the course of the year. The Committee maintains the Maryland Med-Sig -- the computerized bulletin board system of the Medical and Chirurgical Faculty. Dr. H. Gerald Oster has been the system operator (SYSOP) of Med-Sig since its inception.

The Committee is involved in a joint effort with the Med Chi Library, under the direction of the Executive Director, to design and implement an on-line CD-ROM system which runs MEDLINE, a computerized literature application; the members of the Committee have been chosen to help in the testing and debugging.

The Committee continues to give computer demonstrations to hospital medical staffs using a computer with a modem, a phone line, and a projection system. Under the direction of Dr. Rafael C. Haciski, the Committee's Chairperson, a three-hour demonstration was given at the Faculty's Annual Meeting dealing with office computerization on the industry's leading equipment. The seminar dealt with office management software, medical software, and some of the new experimental programs being used on the Apple computer, as well as the IBM compatible.

The Committee demonstrated the Med-Sig bulletin board system at the Faculty's Semiannual Meeting in Ocean City last September.

The Committee is planning a similar demonstration for the Faculty's Semiannual Meeting to be held at Ocean City in September 1991.

Potential projects are:

- Starting a physicians' computer-user group for both novices and advanced users.
- Evaluating medical software.
- Providing physicians with a computer equipment buyers' group.
- Continuing in the education of physicians using computers.
- Promoting Med-Sig as a communication tool for physicians in Maryland.

*Rafael C. Haciski MD*, Chairperson

*Charles P. Adamo MD*  
*Norman K. Bohrer MD*  
*H. Gerald Oster MD*  
*William J. Pogoda MD*

*Martin Berger MD*  
*John B. DeHoff MD*  
*William D. Parnes MD*  
*Mark S. Seigel MD*



## Continuing Medical Education Review Committee

*Mr. President and Members of the House of Delegates:*

**T**he Continuing Medical Education (CME) Review Committee met six times during this past year. Med Chi's program of accreditation of sponsors of CME in Maryland was officially surveyed in July by the Committee on Recognition and Review (CRR) of the Accreditation Council for Continuing Medical Education (ACCME). The program continues to be in full compliance with all of the CRR requirements and has been granted full reaccreditation status through 1994.

The Committee sponsored a workshop on "Guidelines for Accreditation of Continuing Medical Education in Maryland" at the Annual Meeting. Over fifty physicians and staff support personnel attended the session on Wednesday, May 8, 1991.

The Committee was saddened by the passing of John W. Bullard PhD in November. Dr. Bullard served on the Committee for ten years as an advisory member. Recognition of his dedication and faithful service to the work of the Committee was given unanimous endorsement at the January meeting.

Review, accreditation, and reaccreditation actions were made with regard to the following sponsors:

1. American Cancer Society, Maryland Division
2. American Heart Association, Maryland Affiliate
3. American Lung Association of Maryland
4. Anne Arundel General Hospital
5. Baltimore County General Hospital
6. Bon Secours Hospital
7. Carroll County General Hospital
8. Chestnut Lodge
9. Children's Hospital, Inc.
10. Church Hospital
11. Community Psychiatric Clinic, Inc.
12. Crownsville Hospital Center
13. Doctor's Community Hospital
14. Dorchester General Hospital
15. Fallston General Hospital
16. Franklin Square Hospital Center
17. Frederick Memorial Hospital
18. Good Samaritan Hospital
19. Greater Baltimore Medical Center
20. Greater Laurel Beltsville Hospital
21. Harbor Hospital Center
22. Harford Memorial Hospital
23. Holy Cross Hospital
24. Homewood Hospital Center, Inc.
25. Howard County General Hospital, Inc.

26. Kernan Hospital
27. Leland Memorial Hospital
28. Liberty Medical Center
29. Maryland General Hospital
30. Maryland Hospital Education Institute
31. Maryland Psychiatric Society
32. Maryland Radiological Society
33. Memorial Hospital, Cumberland
34. Memorial Hospital, Easton
35. Mercy Medical Center
36. Montgomery County Medical Society
37. Montgomery County Department of Addiction, Victims and Mental Health Services
38. Montgomery General Hospital
39. Monumental City Medical Society
40. National Security Agency
41. The Neurology Center PA
42. North Arundel Hospital
43. Peninsula General Hospital
44. Prince George's County Medical Society
45. Prince George's Hospital Center
46. Sacred Heart Hospital
47. St. Agnes Hospital
48. St. Joseph Hospital
49. Shady Grove Adventist Hospital
50. Sheppard & Enoch Pratt Hospital
51. Sinai Hospital
52. Southern Maryland Hospital, Inc.
53. Spring Grove Hospital
54. Springfield Hospital Center
55. Suburban Hospital
56. Taylor Manor Hospital
57. Union Memorial Hospital
58. University Health Center, University of Maryland
59. Veterans Administration Hospital, Perry Point
60. Washington Adventist Hospital
61. Washington County Hospital

*Eugene P. Libre MD, Chairperson*

*James Castellano MD  
Worth B. Daniels, Jr. MD  
Maen Jamal Farha MD  
Jawad U. Hasnain MD  
Deusdedit Jolbitado MD  
Abdul Nayeem MD  
Carl A. Soderstrom MD  
William L. Thomas MD*

*Irvin H. Cohen MD  
Orlando R. Davis MD  
J. Blaine Fitzgerald MD  
Carol J. Johns MD  
Henry H. Kwah MD  
R. Kennedy Skipton MD  
David A. Stout MD*

### Advisory Members

*John W. Bullard PhD  
Jack L. Mason PhD*

*Charles E. Osborne EdD*

## Committee on Drugs

*Mr. President and Members of the House of Delegates:*

The primary focus of the Committee on Drugs is the evaluation of the prescribing practices of physicians referred by the Board of Physician Quality Assurance (BPQA). These referrals are the result of consumer complaints or, in some instances, routine pharmacy surveys that identify questionable prescriptions of controlled substances.

The Committee met six times during the past year to discuss ten cases referred by the BPQA. In addition to reviewing pharmacy surveys and chart reviews, three physicians were interviewed by the full Committee.

As part of its educational activities, the Committee developed and sponsored a major drug abuse education program during the past year. This seminar, "Practical Clinical Management: Drug Abuse Education for the Primary Care Physician," was held October 20 and 21, 1990 at the Baltimore Convention Center and was well-attended.

The Committee continues to strive to maintain a balance between educating physicians about their prescribing practices and supporting discipline for those who abuse these privileges.

The Chairperson appreciates the continued dedication and commitment of members and staff to the education of physicians in this important aspect of their practice.

*Nelson G. Goodman MD, Chairperson*

*Harbhajan Ajrawat MD  
George H.A. Bone MD  
Lewis H. Dennis MD  
Barry S. Gold MD  
Ramesh K. Khurana MD  
Robert A. Kreeger MD  
Francis J. Montone MD  
John A. Singer MD  
Richard F. Tyson MD*

*Juan A. Beltran MD  
Thomas C. Cullis MD  
Stanley Z. Felsenberg MD  
Nelson H. Hendler MD  
Lawrence Y. Kline MD  
Cresenciano C. Lopez MD  
Patrick J. Sheehan MD  
John R. Smith MD*



*Nelson G. Goodman MD (r) thanks Reynaldo L. Lee-Uacer MD for his Certificate of Appreciation as Chairperson of Med Chi's Committee on Drugs*

## Emergency Medical Services Committee

*Mr. President and Members of the House of Delegates:*

The Committee on Emergency Medical Services (EMS) is pleased to report that it conducted three meetings during the report period. A number of subjects, including legislative bills affecting emergency medicine, were discussed and acted on. The major areas of significance are discussed below.

### ■ Emergency Department Overcrowding

The issue of emergency department (ED) overcrowding was carried over from the prior year because of the Maryland Chapter, American College of Emergency Physicians (MD ACEP) survey which found overcrowding in 75 percent of Maryland hospitals. During this reporting year, additional meetings were held involving the Maryland Institute for Emergency Medical Services System (MIEMSS), MD ACEP, the Emergency Nurses Association (ENA), the Maryland Hospital Association (MHA), and several hospital administrators.

MD ACEP and ENA conducted another survey, the results of which were shared at the May meeting. Committee member, Ameen I. Ramzy MD, is analyzing "by-pass" data. Available information was reviewed at the May meeting.

In general, the new survey indicated a reduction of overcrowding. This may be the result of actions taken based on the first ED Overcrowding Survey. The Committee will continue to study this issue.

### ■ Health Maintenance Organization Agreement on Managed Care

Although time constraints did not allow for its public release, the Committee was successful in getting the Conjoint Managed Care Task Force's Health Maintenance Organization (HMO) Agreement finalized and approved by the Med Chi Council and Executive Committee. However, the HMO Agreement must be revised to incorporate regulatory requirements of bills just passed during the 1991 Legislative Session. This will be one of the charges for the Committee next year.

### ■ Emergency Medicine Legislative Issues

There were approximately eight bills directly affecting emergency medicine and a half dozen others of lesser concern. The Committee witnessed and participated in a strenuous campaign with MD ACEP to help enact favorable



emergency medicine legislation. Ultimately, four bills passed the Senate and the House and were forwarded to the Governor for signature. They are: SB 317/HB 416 - HMO Prompt Payment; SB 701 - HMO Subscribers; and SB 1120 - Basic Insurance Benefits Policy. It is important to note that HB 567 (Mandatory Assignment) was defeated.



Theodore E. Harrison MD (l), President of the Maryland Chapter of the American College of Emergency Physicians, presents the Emergency Medicine Journalism Award to Daniel Kohn MD

## ■ MIEMSS Director Search

The Committee has learned of the intent of the President of the University of Maryland at Baltimore to form a Search Committee to replace the current Director at the completion of his term of office. Because of the importance of this position to the practice of emergency medicine, the EMS committee is seeking representation on the Search Committee. The Committee has communicated its intent to the President of the University.

Other issues reviewed and discussed include:

- The role and influence of Med Chi versus MIEMSS.
- Medicare audits and the reimbursement policy for comprehensive exam billing as it pertains to emergency medicine.
- Access to care for the elderly.
- Motorcycle helmet legislation.
- EMS protocols.
- Disaster planning in light of ED overcrowding.
- Interface problems with managed care plans.

- Dangers of the extrication process.
- Emergency medicine article for the *Maryland Medical Journal*.

It has been my pleasure to serve Med Chi as the Chairperson of this Committee.

*Peter M. Fahrney MD, FACEP, Chairperson*

*Barbara J. Bach MD*

*Alexander P. Cadoux MD*

*Randy S. Ellis MD*

*Sergio B. Mateo MD*

*Ameen I. Ramzy MD*

*Walter L. Scheetz MD*

*Michael A. Stang MD*

*Lawrence F. Blob MD*

*John B. DeHoff MD*

*Jeffrey L. Fillmore MD*

*William K. Mysko MD*

*Bradford A. Ross MD*

*Keith T. Sivertson MD*

## Finance Committee

*Mr. President and Members of the House of Delegates:*

The Finance Committee met three times to develop the 1991 budget. The budget is much more sophisticated than in the past. In addition to the estimated total income and projected expenditures for the entire organization, departmental budgets were prepared. Also, a program budget was included as part of the entire plan of revenue and expenditures.

The Bowman Financial Management Company continues to manage the investment portfolios. The market values of the investments as of December 31, 1990 were as follows:

Consolidated Fund	\$1,720,215
Steiner Fund	\$ 819,502
Pension Fund	\$1,147,382

There was a great deal of volatility in the equity markets in 1990. All of the market indices showed a negative change for the year. Our portfolios were down, but not to the extent of the individual market indices.

The Faculty remains in a solid financial condition and the outlook for 1991 is very positive.

*Lawrence H. Fink MD, Chairperson*

*Albert M. Antlitz MD*

*Francis C. Mayle, Jr. MD*

*Gerald A. Glowacki MD*

*Jose M. Yosucio MD*

## Focused Professional Education Committee

*Mr. President and Members of the House of Delegates:*

**O**n March 21, 1991, the Med Chi Council voted to recommend to the Bylaws Committee the establishment, as a standing committee, of the Focused Professional Education Committee. Med Chi has charged the Focused Professional Education Committee with the creation of a process through which information gathered in the course of peer review activities by the Faculty, by hospitals, and by specialty organizations, may be used to create a network of effective focused medical education. Through this network, information in peer review reports, rather than being used for purely punitive purposes, can be used to *benefit* physicians. The Committee's program will serve as a resource for physicians who wish to preserve their licenses and improve their care of patients. The program will focus on the identified deficits in a physician's practice, assess the physician's needs, and address those needs through specific, individualized, educational activities. To accomplish this, the Committee will solicit the involvement of specialty societies.

Both the Faculty and the Focused Professional Education Committee are fortunate to have the volunteer services and advice of Edward J. Kowalewski MD, Professor Emeritus, Department of Family Medicine, University of Maryland. Since 1974, Dr. Kowalewski has directed a focused education program at the University of Maryland, serving over 500 physicians. Under Dr. Kowalewski's guidance, the program at Med Chi will continue to plan and monitor educational programs. The information gathered during and at the conclusion of each course will be used to make improvements in the program and to prepare periodic reports on how a physician has improved his or her practice -- for that will be the final measure of the program's success.

*Ronald J. Cohen MD, Chairperson*

*Pablo E. Dibos MD*

*Jesse M. Hellman MD*

*David S. McHold MD*

*Karakat S. Gokulanathan MD*

*Edward J. Kowalewski MD*

*Sidney B. Seidman MD*

## Committee on Hospital Medical Staffs

*Mr. President and Members of the House of Delegates:*

**T**he Committee on Hospital Medical Staffs, whose membership includes representation from hospital medical staffs throughout the State, is expected to consult with the Maryland Department of Health and Mental Hygiene (DHMH), medical staffs, professional liability insurers, and the Maryland Hospital Association regarding quality assurance and risk management programs, complaint investigations, and any other matters concerning the establishment of medical standards in hospitals, as well as hospital legal issues including medical staff bylaws.

This involvement with hospital medical staff bylaws exposed the Committee to a JCAHO (Joint Commission for the Accreditation of Healthcare Organizations) standard violation wherein coordination in developing the bylaws did not occur.

Allegedly, the Hospital Administration at Springfield Hospital Center had unilaterally developed hospital staff bylaws which were adopted by the hospital. Consultation and mediation with the hospital medical staff and the administration were unsuccessful in resolving the issue. Consequently, in cooperation with the American Medical Association (AMA) and through the efforts of the Committee, an amicus curiae brief was filed in the Court of Special Appeals of Maryland in support of the Springfield Hospital Medical Staffs' position. This brief received wide distribution and was specifically made available to the JCAHO survey team that conducted a Commission survey in July 1990. Although the hospital received JCAHO accreditation, the Committee, with the help of Med Chi's AMA delegation and the AMA Joint Commissioners, continued to pursue this issue and was instrumental in a re-evaluation of this issue during a focus survey conducted in March 1991.

At the time of the preparation of this report, the results of this survey were not available.

Other issues in which the Committee has become involved are:

- Legal Services for physicians under Professional Review Organization (PRO) or Board of Physician Quality Assurance (BPQA) review.
- Guidelines for hospital medical staff bylaws.
- Hospital medical staff drug-testing.



- DHMH licensing and certification surveys of hospitals.
- Peer review confidentiality.
- Economic credentialing and the awarding of hospital privileges based on procedures, cases, and admissions.
- MIEMSS (Maryland Institute for Emergency Medical Services Systems) Shock Trauma Center and its problems related to staff appointment and the University of Maryland academic appointment system.
- Healthcare Credentials Verification, Inc. (HCV) application questionnaires.
- Use of hospital resources for entrepreneurial ventures.
- Medical Miranda warnings (Patient Self-Determination Act), i.e., the requirement to advise patients of their rights to refuse care and to name proxies in case they become incompetent.

The Committee has been charged by Council with Med Chi's oversight responsibility for Healthcare Credentials Verification, Inc. As the House of Delegates is aware, this organization, which provides a centralized credentialing service for hospital medical staff members, was jointly organized by Med Chi and the Maryland Hospital Association. The Committee was actively involved in assuring that HCV application forms included only those questions pertinent in providing information related to federal and state law or JCAHO standards.

As Chairperson, I wish to express my sincere appreciation to the members of the Committee for their dedication and commitment. On behalf of the Committee, I would like to thank the Executive Committee and the Council for their continued support and encouragement.

Victor R. Hrehorovich MD, Chairperson

Ruben F. Ballesteros MD  
 Louis C. Breschi MD  
 Manuel S. Cockburn MD  
 John W. Eckholdt MD  
 Victor R. Felipa MD  
 L. Myrton Gaines, Jr. MD  
 Robert B. Goldstein MD  
 Deusdedit Jolbitado MD  
 Gary Milles MD  
 Jose Y. Ortiz MD  
 Jerome P. Reichmister MD  
 Guillermo E. Sanchez MD  
 John B. Umhau MD

Habib A. Bhutta MD  
 Cecilio D. Camacho MD  
 Roy B. Dawson, Jr. MD  
 Bayani B. Elma MD  
 Vincent D. Fitzpatrick MD  
 Abdolhamid Ghiladi MD  
 Michael F. Jaworski MD  
 Francis C. Mayle, Jr. MD  
 Andrew Nowakowski MD  
 Michael N. Peters MD  
 Edward J. Richards MD  
 Paul A. Stagg MD

## Immunizations and Infectious Diseases Subcommittee

Mr. President and Members of the House of Delegates:

The Immunizations and Infectious Diseases Subcommittee aggressively addressed immunization issues during 1990-1991.

Committee members discussed and reviewed the recommendations of the American Academy of Pediatrics and the Advisory Committee for Immunization Practices, as well as the policy of Maryland's Department of Health and Mental Hygiene (DHMH). As a result of these efforts, the Subcommittee was instrumental in encouraging Med Chi to adopt the position that a second dose of the measles-mumps-rubella (MMR) vaccine be given to all children age twelve with the option to give the vaccine to younger children ages four through six. Information concerning this recommendation was disseminated to physicians in the *Maryland Medical Journal*.

Further efforts of the Subcommittee focused on the devastating effects of *Haemophilus influenza* on very young children. After an extensive discussion and review of all the available data including information concerning licensed vaccines by Lederle and Merck, Subcommittee members were able to formulate a recommendation concerning immunization of young children which Med Chi adopted and published in the *Maryland Medical Journal*. Specifically, the Subcommittee made recommendations incorporating vaccination for *Haemophilus influenza* into the well-baby schedule and providing for immunization with either of the two licensed *Haemophilus influenza*, type B (HIB) vaccines produced by Lederle and Merck.

The Subcommittee is committed to pursuing immunization and infectious disease issues and channeling its efforts in the areas of educating, informing, and updating physicians on these critical issues.

Robert J. Ancona MD, Chairperson

Clayton L. Moravec MD      Mathuram Santosham MD  
 Robert E. Yim MD

### Advisory Members

Timothy Doran MD      Diane M. Dwyer MD  
 Neal A. Halsey MD      Ebenezer Israel MD, MPH  
 Margaret D. Rennels MD      R. Barry Trostel

## Laboratory Regulations Subcommittee

*Mr. President and Members of the House of Delegates:*

A Subcommittee to the Public Health Committee was appointed to study Maryland's laboratory regulations during the 1990-1991 year.

The Subcommittee was given the charge to evaluate the regulations concerning physician office and other point-of-care laboratories and submit recommendations to the Public Health Committee for presentation to the Executive Committee. There were seven physicians appointed to this Subcommittee. These physicians specialized in Internal Medicine, Family Practice, Hematology, Oncology, Pediatrics, Cardiovascular Diseases, Infectious Diseases, and General Preventive Medicine.

After a careful review of the physician laboratory regulations (Physician Office and Other Point-of-Care Laboratories, COMAR 10.10.06) and a review of comments submitted by Med Chi physicians, the Subcommittee determined that the Maryland laboratory regulations were unreasonably expensive and cumbersome and should be greatly simplified. To this end, the Subcommittee did a section-by-section revision of the regulations. Three sections of the regulations were not specifically revised since the Subcommittee felt that more expertise was required in subspecialty areas not represented on the Subcommittee.

The Subcommittee found that the amount of recordkeeping, documentation, and number of controls and calculations required by the regulations were unduly burdensome and the effect of the regulations would be to reduce vastly the number of physician office practices that could afford to perform laboratory work for patients. Therefore, accessibility to timely, efficient diagnosis and treatment would be significantly decreased. Furthermore, this situation would force physicians to send significantly ill patients for emergency room evaluation, thus increasing medical costs.

All of the Subcommittee's recommendations were submitted to the Public Health Committee, which strongly supported the recommendations and presented them to the Executive Committee. The Executive Committee approved of the recommendations and forwarded them to Jack DeBoy DrPH, Assistant Director, Laboratories Administration, Department of Health and Mental Hygiene (DHMH), for his department's consideration. Further-

more, Med Chi's Council demanded that full implementation of the laboratory regulations be withheld until a more reasonable and fair method of inspection and certification could be devised.

It was of particular concern to the Subcommittee and Med Chi's Council that the DHMH Laboratory Advisory Committee did not adequately address the realities of small office medical practice when it promulgated the laboratory regulations. Furthermore, the Subcommittee questioned excessive regulation in light of the fact that there was no published evidence of patient harm from simple office testing.

The Subcommittee is still a viable committee that is continuing a dialogue with DHMH about the laboratory regulations and the health care needs of the citizens of Maryland.

The Subcommittee would like to express its appreciation for the support and guidance provided by the Public Health Committee and the Executive Committee.

*Carol W. Garvey MD, Chairperson*

*Stuart B. Bell MD*

*Eugene P. Libre MD*

*Stanley M. Silverberg MD*

*Esther Edery MD*

*Michael A. Sauri MD*

*Ronald C. Sroka MD*



*Hiroshi Nakazawa MD, Statewide Coordinator for the Doctor/Lawyer/Teacher Partnership Against Drugs thanks all physicians who volunteered for this program.*



## Legislative Committee

*Mr. President and Members of the House of Delegates:*

**D**uring 1990-91, the Legislative Committee worked on many significant issues and supported the passage of public health measures while opposing extensive governmental interference in medical practice. An overview of legislation on which the Committee worked to pass or defeat on behalf of Med Chi physicians and their patients is summarized here.

### ■ Public Health Issues

**Smoking.** The medical community lent its full weight to efforts by the Maryland Coalition on Smoking or Health to push legislation aimed at preventing young people from becoming smokers. The Medical and Chirurgical Faculty joined the American Cancer Society - Maryland Division, the American Heart Association - Maryland Affiliate, and the American Lung Association of Maryland in an effort to increase the excise tax on cigarettes and to prohibit or limit the sale of cigarettes by vending machines. Senate Bill 454, "Tobacco Health Protection Fund," would have increased the State excise tax by 20 cents per pack (one cent per cigarette). It was expected that this would result in a comparable decrease in first-time smokers while raising eight million dollars in new revenue, much of it earmarked for health education programs. However, with many new legislators elected on "no new taxes" platforms, few expected any meaningful tax increases to pass.

Nonetheless, with additional pressure from Maryland physicians, the Legislature voted to increase the excise tax for the first time in ten years (by three cents per pack) and also to apply the State sales tax to cigarettes. Although the bill was amended to eliminate the dedication of funds to health education programs, the result will be at least a ten-cent increase in a pack of cigarettes and an expected decrease in new, young smokers.

Efforts to restrict minors' access to cigarettes did not fare as well. Five bills failed in committee despite testimony from voluntary health organizations and many physicians. HB 39 would have required the use of tokens in cigarette machines, HB 662 and SB 625 would have imposed restrictions on the location of cigarette vending machines, while HB 663 would have banned sales by vending machines altogether. HB 673 would have made vending machine operators criminally liable for sales to minors, just as any over-the-counter vendor is currently

liable. The Coalition is expected to renew its efforts next year to limit cigarette access to minors.

**Mandated Benefits.** In support of its specialty societies, Med Chi testified in favor of two proposals to require insurance carriers to cover specific medical procedures. As passed by the General Assembly, HB 407 and SB 749 will require coverage for mammography screening beginning with a baseline mammogram for women between the ages of thirty-five and thirty-nine, then every two years for women between the ages of forty and forty-nine, and annually for women fifty years of age and over. As originally introduced, HB 407 would have required any physician performing mammography after July 1, 1991 to be accredited by the American College of Radiology (ACR). This legislation has been introduced for the past four years in various forms and Med Chi has opposed it each year. As amended, HB 407 recognizes ACR accreditation as a valid form of quality assurance but also recognizes Health Care Financing Administration (HCFA) accreditation, as well as accreditation by a program yet to be developed by Med Chi in conjunction with the Maryland Radiological Association and the Department of Health and Mental Hygiene (DHMH).

Another series of bills failed in committee, despite approval by the Governor's Commission on Mandated Benefits and testimony by Maryland physicians. House Bill 801 and Senate Bills 505 and 724 would have mandated coverage for preventive child wellness services, including immunizations and office visits up to a specific age.

**Patients' Rights.** The General Assembly passed two major pieces of legislation affecting individuals' rights in health care settings while defeating a third in committee. First, HB 588 revises the current procedures that mental health facilities use to override a patient's refusal of medications. In a recent decision, Maryland's highest court found the existing procedures to violate the requirements of due process. This bill corrects the law to conform to the Constitution.

The Legislature this year passed a compromise abortion bill early in the Session, avoiding a lengthy filibuster like the one in 1990 that interfered with the passage of other important legislation. While Med Chi took no position on Senate Bill 162, it did provide information requested by the committee regarding the affect of abortion statutes on medical practice. The new law, as signed by the Governor, essentially repeals statutes that appear to violate the U.S. Supreme Court decisions that followed *Roe v Wade*, giving women a right to be free from government interference in choosing to terminate a first-trimester pregnancy. It also allows a physician to avoid parental



During the 1991 Annual Meeting at College Park, J. David Nagel MD thanks Med Chi members for electing him Med Chi President for 1991-1992.

notification prior to a minor's abortion if the physician determines the minor is "mature and capable of giving informed consent" or that notice "would not be in the best interest of the minor." Left open by the bill is whether a health care provider who refuses to perform an abortion may be held liable for failure to refer a patient to another provider who would.

The patients' rights bill that failed, SB 250, would have established minimum requirements for a patient to execute a durable power of attorney for the purpose of designating who can make health care decisions in the event he or she becomes disabled. The bill would have legitimized durable powers of attorney currently in use and would have given immunity to health care providers who follow the direction of such a document. Opponents claimed that such a law was unnecessary, since the Attorney General has already issued an opinion that such powers of attorney may be executed even without a statute in effect.

**Other Proposals.** Two other public health initiatives were defeated this year. HB 197 would have placed responsibility on parents to assure that firearms in the home were safely kept out of children's hands. Due to extensive pressure from the gun lobby, this measure was defeated in committee. Also, efforts to reinstate the prior law requiring motorcycle helmets (SB 130/HB 31) or protective headgear (HB 32) went down to defeat once more.

## ■ Medical Practice Issues

**AIDS.** Two important bills were introduced this year that related to the testing of individuals for the human immunodeficiency virus (HIV). Working with Senator Paula Hollinger, Med Chi was able to amend one bill to conform more closely to legislation Med Chi had proposed. Med Chi worked hard to defeat or modify the other bill.

HB 1156 would have required physicians to be tested periodically for the presence of HIV and to report their status to appropriate credentialing and licensing bodies. This legislation came in the wake of the situation at The Johns Hopkins Hospital in which a physician who subsequently died of Acquired Immunodeficiency Syndrome (AIDS) had been performing surgical procedures on various patients. This legislation was defeated in committee largely because of an amendment that was placed on the following bill, SB 203.

As passed, SB 203 allows for testing of certain individuals without informed consent using substituted consent as provided by certain Maryland statutes. The legislation further provides that the Med Chi Faculty, in consultation with the Centers for Disease Control (CDC), the Maryland Hospital Association (MHA), and DHMH, shall develop a practice protocol for physicians infected with HIV and report this practice protocol to the General Assembly on December 2, 1991.

**Immunity from Liability.** HB 1090, a very important piece of tort reform, provides that a physician for a sports program is not liable for any act or omission resulting from the rendering of services unless the act or omission constitutes willful or wanton misconduct, gross negligence, or intentionally tortious conduct.

**Physician Discipline.** Several bills were proposed that would have affected the State regulation of medical practice. As proposed, HB 678 would have stripped the Board of Physician Quality Assurance (BPQA) of its ability to discipline a physician for medical practices and procedures that are clearly outside accepted scientific thought and practice. The legislation was proposed by several physicians currently under investigation and review by the BPQA for questionable medical judgment. The hearing for this legislation lasted for over four hours and more than 203 witnesses testified in favor of the bill including former Secretary of the Department of Health and Mental Hygiene, Neil Solomon MD. Although Med Chi was the only health care group to testify against the legislation, the bill was defeated in committee.

As proposed, HB 876 would have established new disciplinary grounds for disciplining physicians who have sexual relations with their patients under various circumstances. Unfortunately, the way this legislation was drafted, a physician who happens to treat his or her spouse would likewise be prohibited from having sex with him or her during treatment or for as much as a year after treatment has ceased. Under intense pressure from physicians, the sponsor withdrew the legislation.

Another bill will significantly increase the resources that the BPQA will have available to handle its case load. As



passed, SB 579 establishes a Board of Physician Quality Assurance Fund and a Board of Nursing Fund in the State Treasury, the funds of which are to be used exclusively to cover the actual, documented, direct, and indirect costs of fulfilling the responsibilities of the BPQA and the Board of Nursing. All of the fees collected by the Board of Nursing and the BPQA (with the exception of those collected for the Physician Rehabilitation Program of Med Chi) are to be turned over to the Comptroller, who will then place 20 percent in the State's general fund, and the remainder in the Funds of the respective Boards. The Funds are continuing and nonlapsing; monies remaining in these Funds at the end of the fiscal year will not revert to the general fund but may be carried forward to the next year for the Boards to use. The Funds will be administered by the Chairpersons of the respective Boards.

*Office Practice Issues.* Three major bills impacting on physician office practices were introduced this Session.

During the 1990 General Assembly Session, legislation passed the House Environmental Matters Committee that would have prohibited a physician from referring patients to any entity in which the physician had a substantial financial interest. In an effort to prevent a prohibition bill from passing the 1991 Maryland General Assembly, Senator Paula Hollinger and the Health Subcommittee of the Senate introduced SB 169 requiring all health care providers to disclose the existence of the ownership of a significant beneficial interest, inform the patient that the patient may use another provider of such services, and require the patient to acknowledge in writing receipt of the statement. As drafted, this legislation is largely in conformance with the American Medical Association (AMA) and Med Chi ethical policies on referral of patients.

Two bills were introduced this Session that would have affected physician prescribing practices.

HB 1210 would have required physicians to use a pad with different colors for prescribing Schedule II, III, and IV drugs. As amended by the sponsor, SB 193 would have required the use of a serialized pad when prescribing Schedule II drugs. This is its second appearance in as many years before the Maryland General Assembly. The Senate bill was amended heavily in committee and, ultimately, was re-referred back to committee by Senator Hollinger for summer study. The house bill was killed in committee after the Senate action.

HB 408 presented an opportunity to correct a particularly intrusive and potentially damaging regulation of x-ray services offered by physicians in their offices. Regulations were promulgated which would have certainly abolished most forms of x-ray services offered by family



President Reynaldo L. Lee-Llacer MD (left) presents Lieutenant Governor Melvin A. Steinberg MD with a Certificate of Appreciation. Med Chi also presented the Lt. Gov. with the Dr. Henry & Page Laughlin Citizen of the Year Award.

practitioners and internists. The new regulation would have virtually required all physicians to employ radiation technologists to perform even the simplest x-rays. Although promulgated by DHMH, the BPQA ultimately drafted the regulation. An amendment to HB 408 directs the BPQA to work in conjunction with Med Chi in the creation of a new limited class of x-ray assistant who may perform simple x-rays under the direct supervision of a physician. This new class of assistant will assure access for patients who need basic radiological exams in a physician's office. The BPQA is further required to report back to the Senate Finance Committee and House Environmental Matters Committee by December 2, 1991 with a full description of this category so that legislation can be drafted and ready for introduction in the 1992 General Assembly.

*Other Health Care Providers.* The medical community also dealt with several issues relating to other types of health care providers. In each, Med Chi was able to assure that reasonable measures were enacted to protect the health and welfare of patients.

The purpose of SB 501 was to correct an unreasonable provision in the existing law relating to physician assistants. Currently the law requires a physician to sign any diagnostic orders by a physician assistant within twenty-four hours. The new bill will allow the supervising physician forty-eight hours to countersign these orders. This legislation rectifies the only major problem in DHMH-proposed regulations governing physician assistants identified by both the medical community and the physician assistants organization.

After HB 676 was defeated on the floor of the House, Senator Hollinger moved SB 428 out of the Senate to the House Environmental Matters Committee. The bill sat in committee until the last days of the Session. After it was

heavily amended, the bill passed the Assembly on the very last day. However, due to the lack of consensus in the orthopaedic community, the Governor decided to veto the bill. The bill expanded the scope of podiatry practice in hospitals and freestanding surgical centers, but required hospital credentialing of the podiatrist for the expanded procedures. Additionally, the bill allowed hospitals to approve the training program attended by the podiatrist.

HB 1211 was proposed by chiropractors who desired to be renamed Chiropractic Physicians. Even though the bill had the sponsorship of a chairperson of a major committee in the House of Delegates, it was defeated overwhelmingly in committee. The proponents have pledged to bring this legislation back.

As drafted, HB 1087 would have increased the role of non-physician acupuncturists. Additionally, the bill would have abolished the current requirement of physician supervision of patients seeking acupuncture as a treatment. The bill was defeated, although the non-physician acupuncturists intend to bring the measure back to the next General Assembly.

*Physician Fee Regulations.* Five major attempts to regulate physicians' fees were defeated after intense efforts by the physician community.

Last year during the 1990 Maryland General Assembly, a coalition, comprised of the Maryland Chamber of Commerce and the Maryland State and District of Columbia AFL-CIO, proposed legislation to include radiologists, anesthesiologists, and pathologists under the regulatory net of the Health Systems Cost Review Commission (HSCRC). This legislation was defeated. This year, this very same coalition brought two pieces of legislation forward. SB 700 would have studied the prospect of placing all hospital-based physicians under the HSCRC for purposes of fee regulation. Even though the legislation was limited to hospital-based physicians, the coalition made it quite clear that ultimately it would like to see all physicians controlled by the HSCRC. This legislation was defeated in the Senate Finance Committee. However, the coalition continues to be aggressive about its intent to control physicians' fees and intends to conduct a study this summer, paying for the study out of its own coffers.

SB 742 would have established a state agency to monitor and catalogue physicians' fees as well as their individual practice patterns. This bill was supported not only by the Chamber of Commerce and the AFL-CIO but by the Governor's Commission on Health Care Policy and Financing. SB 742 was also defeated in the Senate Finance Committee.

HB 567 would have instituted Mandated Medicare Assignment for all services offered in an emergency room

setting. This legislation is similar to mandated assignment bills introduced over the last four years, although it was limited in scope. The bill was soundly defeated in committee but it promises to be a recurring legislative theme.

Had it not been defeated in committee, HB 54 would have prohibited the Workers' Compensation Commission from ordering payment of medical bills unless the provider submitted a medical report, an itemized bill, and a request for payment in accordance with the Commission's *Medical Fee Guide*. While seemingly innocuous, the bill would have established a statutory basis for the Commission's current position that its *Fee Guide* is, in fact, a "cap." Another bill that failed, SB 263, would have allowed the Workers' Compensation Commission to revise its *Medical Fee Guide* periodically instead of every two years as is currently required.

### ■ Health Care Financing

*HMO Issues.* As introduced, SB 701 would have clarified that the prohibition on health care providers billing HMO subscribers for covered services applies only to providers under contract with the HMO.

However, during the debate on this issue, the Attorney General's office expressed strong concern over the consumer impact of such legislation. In response to this concern, the General Assembly adopted amendments requiring HMOs to pay noncontracting providers for covered services rendered pursuant to a written or verbal authorization by the HMO or a provider under contract with the HMO, in accordance with the prompt pay requirements and at the noncontracting provider's usual, customary, and reasonable rate. If the HMO's normal payment to contracting providers for the covered service is different (i.e., lower), the HMO would be responsible for collecting the difference from its own subscriber. In addition, the amended bill:

- subjects HMOs to the Unfair Claims Settlement provisions of Article 48A;
- clarifies that the "hold harmless" provision applies to subscribers of HMOs issued a Certificate of Authority in Maryland;
- requires providers, at the request of the HMO, to provide certain summary documentation supporting the claim; and
- provides that certain penalties for violations of these provisions apply.

As passed by the Legislature, SB 317/HB 416 requires HMOs to pay provider claims within thirty days of the receipt of a claim and, if the HMO does not comply, to automatically pay 1.5 percent interest monthly on the



unpaid balance. The interest penalty may be waived only if there is a good faith dispute regarding the legitimacy of the claim or the appropriate amount of the claim, and the HMO: (1) notifies the provider within fifteen days of receipt of the claim that the claim is disputed and the specific reasons for the dispute, and (2) pays any undisputed portion of the claim within thirty days.

HB 1263 requires that an HMO entering into an "administrative service provider contract" or a capitation agreement with any entity is ultimately responsible for payments to a provider who is not a party to the contract and renders covered health care services to a subscriber pursuant to a referral by the contracting entity. This legislation is designed to address the problem resulting from the failure of some physician groups under capitation agreements to pay for referral services rendered by other noncontractual health care providers.

*Insurance Issues.* Beginning January 1, 1992, SB 633/HB 803 expands the existing prompt pay requirements for insurers by requiring insurers:

- to either pay the claim within thirty days or send a "Notice of Receipt and Status of Claim" within thirty days of receiving a claim stating that the insurer refuses to pay the claim and stating the specific reason, or indicating that the insurer requires further specific information to make a determination on reimbursement;
- to automatically add the interest penalty for claims paid more than thirty days after the receipt of the claim; and
- to pay the undisputed portion of a claim within thirty days in order to qualify for the waiver of the current interest penalty for the disputed portion of the claim.

HB 618 builds on the existing prompt pay requirements for insurers by establishing progressively higher interest penalties for late payments. Under the bill, claims unpaid from 31 to 60 days after submission are subject to a 1.5 percent interest penalty; from 61 to 120 days a 2 percent interest penalty per month; and from 120 days and beyond a 2.5 percent monthly interest penalty. Consequently, a claim unpaid a year after submission would be subject to a 28 percent cumulative interest penalty.

SB 77 requires that all health insurance plans delivered in this State be provided in simplified language and approved by the Insurance Commission for compliance with simplified language standards. Regulations are to be adopted and consistent with the Life and Health Insurance Policy Language Simplification Model Act.

HB 1120 waives mandated health insurance benefit

laws and authorizes insurers to provide a limited benefits policy to individuals who have not been covered by any health insurance plan for the thirty-four-month period preceding the date of application and who are not eligible for coverage under Medicare and, on a group basis, to an employer with at least two but no more than twenty-five full-time employees. The bill limits the availability of this policy to individuals and groups to no more than three years, unless the General Assembly fails to enact a transition plan to assist employers in providing more comprehensive benefits.

The policy must provide at least:

- hospitalization coverage for either the first ten days of inpatient hospital and professional services per year whether for mental or physical illness, or the first ten days of inpatient hospital and professional services limited to physical illness only;
- ten office visits with a licensed health care provider;
- reasonable coverage of prenatal care;
- reasonable coverage of obstetrical care;
- reasonable coverage of medically necessary hospital emergency room care using the American College of Emergency Physicians (ACEP) definition of emergency;
- newborn childcare from birth; and
- preventive services.

The bill also calls for the development of small business health market reform that would limit medical underwriting and certain rating practices.

As introduced, SB 409/HB 342 would have required private utilization review agents to disclose their criteria for denying payment of medical care claims. While this provision was deleted from the bill before it passed, the amended version still contains a prohibition against a private review agent making referrals to a health care provider in which it has an interest.

Another bill worthy of consideration was SB 413, which would have prohibited a nonprofit health plan from charging a provider a processing fee if the claim is processed electronically. Under intense pressure from the insurance industry, the bill was defeated in committee.

Characterized in the press as a Medicaid "scam," HB 842 was intended to fund a sixty million dollar deficit in the Medicaid budget largely caused by federal cut-backs. Rather than impose cuts in payments to providers for care of Medicaid patients, the DHMH opted to double the amounts paid to providers, then take

back the surplus by means of a provider tax. The effect is to shift more of the financial burden back onto the federal government's matching funds without affecting the providers' net payment. Physicians will not have to change the amount they bill Medicaid, since they are now required to bill their usual and customary rate. Should this financing mechanism be repealed or declared invalid, the provider tax automatically terminates.

*Susan R. Guarneri MD, Chairperson*

**Allegany County Medical Society**

*Frederick Miltenberger MD      Wayne C. Spiggle MD*

**Anne Arundel County Medical Society**

*Henry H. Canton MD      Thomas C. Cullis MD*  
*Joseph J. Martinez-O'Hara MD      Margaret M. Mullins MD*

**Baltimore City Medical Society**

*Paul Burgan MD      Gerald J. Carroll MD*  
*Allan D. Jensen MD      Murray A. Kalish MD*  
*Raymundo S. Magno MD      Robert L. Marcus MD*  
*Mike Massumi MD      Hiroshi Nakazawa MD*  
*Gary W. Nyman MD      Ernesto Rivera MD*  
*Gary L. Rosenberg MD      Sidney B. Seidman MD*  
*Edward L. Sherrer MD      Keith T. Sivertson MD*  
*James E. Smith, II MD      Israel H. Weiner MD, MPH*  
*Joseph W. Zebley MD*

**Baltimore County Medical Association**

*Albert L. Blumberg MD      Harold B. Bob MD*  
*Herman Brecher MD      Mayer C. Liebman MD*  
*Michael O. Magan MD      Susan W. Owens MD*  
*Gary W. Pushkin MD      Scott M. Rifkin MD*  
*Mehdi L. Yeganeh MD      David P. Zajano MD*

**Carroll County Medical Society**

*Michael K. McEvoy MD*

**Charles County Medical Society**

*Arturo M. Monteiro MD      George H. Wathen MD*

**Harford County Medical Society**

*Henry H. Kwah MD*

**Howard County Medical Society**

*Jeffrey G. Middleton MD*

**Kent County Medical Society**

*John C. Seymour MD*

**Montgomery County Medical Society**

*Jeffrey A. Abend MD*

**Prince George's County Medical Society**

*Norman K. Bohrer MD      Joel L. Falik MD*  
*Harvey Fernbach MD      Nelson G. Goodman MD*  
*Suresh C. Gupta MD      Moosa Kazim MD*  
*Seth H. Lourie MD      Robert A. Mendelsohn MD*  
*Jack C. Meshel MD      Robert Ruderman MD*

**Washington County Medical Society**

*Edward W. Lampton, Jr. MD      John G. Newby MD*

**Wicomico County Medical Society**

*Hilda I. Houlihan MD      Richard H. Meeks MD*

**Maryland-D.C. Society of Anesthesiologists**

*Paul T. Elder MD*

**Maryland Society of Cardiology**

*Raymond D. Bahr MD      Donald H. Dembo MD*  
*Kenneth B. Lewis MD*

**Maryland Dermatological Society**

*Jeffrey G. Middleton MD*

**Maryland Chapter, American College of Emergency Physicians**

*David S. Davis MD      Randy Sue Ellis MD*

**Maryland Society of Eye Physicians and Surgeons**

*Joseph W. Berkow MD      Allan D. Jensen MD*  
*Gerald D. Rogell MD*

**Maryland Academy of Family Physicians**

*Marion Friedman MD      Joshua R. Mitchell MD*

**Maryland Society of Gastrointestinal Endoscopy**

*Richard B. Williams MD*

**Maryland Society of Internal Medicine**

*Stuart B. Bell MD*

**Maryland Neurosurgical Society**

*Ronald J. Cohen MD      Henry M. Shuey, Jr. MD*

**Maryland Society of Nuclear Medicine**

*David C. Moses MD*

**Obstetrical and Gynecological Society of Maryland**

*Steven M. Berlin MD*

**Maryland Orthopaedic Society**

*Thomas E. Hunt MD*

**Maryland Society of Otolaryngology - Head and Neck Surgery**

*Ira D. Papel MD      H. Russell Wright, Jr. MD*

**Maryland Society of Pathologists**

*Rudiger Breitenacker MD      Maurice B. Furlong MD*  
*Usha J. Mehta MD      Bert F. Morton MD*  
*John G. Newby MD      Alberto C. Seiguer MD*  
*Howard L. Siegel MD*

**Maryland Society of Physical Medicine and Rehabilitation**

*Michael S. Shear MD*

**The John Staige Davis Society of Plastic Surgeons of Maryland**

*Robert J. Spence MD*

**Maryland Psychiatric Society, Inc.**

*Thomas E. Allen MD      Bruce A. Hershfield MD*  
*Arthur M. Hildreth MD*

**Maryland Radiological Society**

*James E. Bell MD      Albert L. Blumberg MD*

**Maryland Chapter, American College of Surgeons**

*Thomas R. Gadacz MD      Charles Leve MD*

**Auxiliary**

*Carol Allen      Dan DeVito*  
*Sue Sherwood*



## Library and History Committee

*Mr. President and Members of the House of Delegates:*

**D**uring 1990-1991, the Library and History Committee met eight times. Three major issues were identified and addressed. They were: (1) the condition and value of the Faculty's rare book collection; (2) the implementation of a program to recruit physician volunteers to catalog the rare book collection; and (3) the development of a plan to publish a book on the history of medicine in Maryland for the Faculty's bicentennial in 1999.

Other issues addressed by the Committee included the updating of the library's gift donation policy, a review of the library's tax status regarding donations, issues related to the rental of the Louis A. Krause Room, ongoing projects with the Maryland Science Center, preliminary work on remote access to literature searching for members, and a comprehensive usage study of the library's journal collection.

### ■ Condition and Value of the Faculty's Rare Book Collection

In 1990, the Executive Committee requested a joint report from the Library and History Committee and the Finance Committee on how to best capitalize on the history of medicine collection. Dr. Nancy Nichols, on behalf of the Library and History Committee, issued a report on the condition of the Faculty's 10,000 volumes of medical texts published before 1900 and the 7,500 pre-1900 medical pamphlets in the collection. An estimated monetary value of the collection was included based on the condition of the books and the rare book selling market. Dr. Nichols also highlighted the recently implemented preservation policy for the collection, as well as future plans for its computerization.

### ■ Physician Volunteer Project

The Committee finalized plans with the library staff for the recruitment of senior physicians to volunteer their services to enter the rare book collection into the Faculty's computerized book catalog. During the summer, a notice was placed in the *MMJ*, and a letter seeking volunteers was sent by the Committee to emeritus members in the Baltimore area.

Over fifteen members expressed interest. They met with the library staff for two full days to receive instructions on cataloging. Thereafter, they met for four hours every other week and cataloged books into the collection under the supervision of Ms. Susan Harman, the Faculty's

Associate Librarian. The Committee recognizes the great amount of work needed to complete this project and will seek additional volunteers this summer.

### ■ Bicentennial Book Project

The Committee, after detailed discussions and an interview with a local medical author, submitted a recommendation to the Executive Committee that the Faculty form an Ad Hoc Bicentennial Publication Committee. This Committee, comprised of members from various other Faculty committees, would work to guide the project to completion.

The Executive Committee approved the recommendation in principle and asked the Library and History Committee to provide a financial statement with respect to the cost of this project. The Committee, led by Dr. Ronald Fishbein, met with local medical publishers and authors to discuss the financial arrangements for this work. At the end of the year, Dr. Fishbein, with the Committee's approval, drafted a financial report on the cost of the project.

The Committee is also pleased to report that one local book publisher has expressed serious interest in publishing this work.

### ■ Goals for 1991 - 1992

The Committee hopes to complete its work on the bicentennial book project early in the year and it will begin recruitment of additional volunteers for the cataloging project. The Committee plans to submit an article to the *MMJ* for publication consideration describing the work of the volunteers. The summer will also see the Committee complete work on the journal usage study.

The Committee hopes to develop to full-term the library's capabilities to provide the membership with remote access information. The Committee also plans to develop a closer relationship with the Maryland Science Center with respect to medical exhibits in the 1990s.

The Committee wishes to extend its thanks to Med Chi staff for their hard work and their cooperation with the Committee, and to Committee members for their cooperation, enthusiasm and support of the library. A special thanks goes to the commuting members of the Committee.

*Nancy T. Nichols MD, Chairperson*

*Ronald H. Fishbein MD, Vice Chairperson*

*Samuel J. Abrams MD*

*Victor E. Albites MD*

*Lewis M. Burdette MD*

*Milford M. Foxwell MD*

*Henry B. Wilson MD*

*Conrad B. Acton MD*

*John W. Buckley MD*

*Edward Cornfeld MD*

*Stanford M. Goldman MD*

## Committee on Long-term Care and Geriatrics

*Mr. President and the Members of the House of Delegates:*

**T**he Committee on Long-term Care and Geriatrics met seven times during the 1990-1991 year to discuss topics related to long-term care and geriatric medicine.

Continuing its long-standing commitment to assuring the highest quality of care in long-term care facilities, the Committee concentrated its focus on establishing medical quality assurance guidelines in long-term care institutions. By means of a summer 1991 survey to nursing home medical directors, alternates, and members of the academic community, the Committee hopes to establish a statewide consensus on the minimum standards of care in nursing home medicine, enhancing the quality of medical care delivered in nursing homes. The survey addresses: standardization of documentation of mandated doctor/patient interactions; clarification of responsibilities by the medical staff for purposes of quality assurance, and license and certification surveys; and documentation necessary for a re-evaluation or for reimbursement for services.

The Committee cosponsored a scientific session with the Alzheimer's Association of Central Maryland at the 1991 Annual Meeting of Med Chi. The session was titled, "Alzheimer's Research and Resources in Maryland," and was designated as the Jesse C. Coggins MD Memorial Lecture. Attendance and response were very good.

The Committee looks forward to the coming year and will strive to provide appropriate education to physicians and the public. The Chairperson appreciates the dedication of the Committee members and the Med Chi staff.

*George Taler MD, Chairperson*

*Harold B. Bob MD  
Paul R. Fleury MD  
Herbert J. Levickas MD  
Elsa R. Merani MD  
Daniel S. Pearl MD  
Aubrey D. Richardson MD  
Gordon M. Smith MD  
Debra S. Wertheimer MD*

### **Advisory Members**

*Lois Leonard MD*

*Thomas E. Dooley MD  
John F. Hartman MD  
Allan H. Macht MD  
Donald W. Mintzer MD  
Paul S. Rhodes MD  
Joseph Shear MD  
John B. Unibau MD  
Joseph W. Zebley MD*

*Steven Levinson MD*

## Committee on Managed Care and Third Party Liaison

*Mr. President and Members of the House of Delegates:*

**T**he Committee on Managed Care and Third Party Liaison was successful in bringing to resolution a number of key issues or grievances of long and short-standing. Major issues confronting the Committee included:

- *Delayed payments by health maintenance organizations (HMOs) and third party carriers.* This issue was resolved by legislation in which an interest penalty applies when clean bills are not paid within thirty days.
- *Prohibition of health care providers from billing any patient subscriber to an HMO.* Legislation was successfully introduced to provide for the billing of patients who voluntarily seek services outside of their HMO and for non-covered services of HMOs.
- *Global health policy by the Health Care Financing Administration (HCFA).* This policy resulted in a ground swell of objection based on the failure to differentiate between services provided for a defined entity and repeated services that may be required by a chronic or ongoing illness. HCFA has accepted Med Chi comments and agreed to further study the regulation to address the issues raised.
- *Independent third party peer review.* Third party carriers' determination of reasonable compensation based on internal or consultative appropriateness review was challenged on the basis of the arbitrary creation of a "board of quality assurance" which is not a recognized board of the American Medical Association (AMA), as well as other shields behind which third party carriers have avoided meeting their fiduciary obligations. The issue has been referred to legal counsel for assistance in challenging such artificially created entities.
- *Established guidelines for physicians joining HMOs or other managed care contracts to avoid egregious clauses.* This issue was referred to legal counsel to provide guidelines for such contractual arrangements, including third party carrier contracts prohibiting providers from billing patients until such time as their primary and secondary insurance pays for services; this prolongs provider compensation.



The issue will be addressed with medical directors of third party carriers and Medicare.

- *Individual grievances concerning failure to pay or delay payments.* In most instances, providers registering complaints had not exhausted standard appeal mechanisms and were specifically advised to do so.
- *The need for updating fee schedules from third party carriers.* This issue was referred to medical directors of Blue Shield and Medicare for consideration. A major responsibility of the Committee was met by participation in the HCFA regional meeting to alert physicians to changes in fee policy and regulations, including the global policy previously described. A significant accomplishment of the Committee has been the establishment of a much better relationship between the Med Chi Faculty and the medical directors of Blue Shield and Medicare.

Donald H. Dembo MD, Chairperson

Joseph W. Berkow MD

Jay Gerstenblith MD

Colen C. Heinritz MD

Perry Hookman MD

David R. Morales MD

Selvin Passen MD

Lawrence D. Pinkner MD

David M. Solomon MD

Advisory Members

Barry S. Gold MD

Stanley Z. Felsenberg MD

Jagdish S. Gill MD

Pietr Hitzig MD

Don M. Long MD

Susan W. Owens MD

Carlos N. Patalinghug MD

Ruben Reider MD

Stephan L. Werner MD

Arthur T. Keefe, Jr. MD

## Physician's Practice Digest

During the past year, in an effort to improve communications and widen the scope of member services, Med Chi developed a new publication, Physician's Practice Digest. Issued quarterly, PPD features information related to medical practice management. The reaction to PPD has been overwhelmingly positive within Maryland as well as around the country. The publication won the 1990 Sandoz Pharmaceutical Award for Excellence in Medical Journalism.

Med Chi looks forward to Physician's Practice Digest becoming a reliable and up-to-date source of crucial practice management information for all physicians in Maryland. Submissions and suggestions are always welcome!

## Maryland Medical Journal Editorial Board

Mr. President and Members of the House of Delegates:

This report covers the calendar year 1990 (Volume 39). Throughout this period, the Editorial Board encouraged the submission of original research, case studies, review articles, medical history, and diagnostic and therapeutic updates, as well as commentaries and Letters to the Editor on all subjects of interest to Maryland physicians.

In all but three months there were special or thematic issues. The traditional legislative issue in January included Med Chi's Legislative Directory and four Faculty Position Papers. The May issue highlighted Reynaldo Lee-Llacer MD, the 1990-1991 Med Chi President, who took office May 11, 1990. The Faculty's annual reports appeared in the August issue.

Four issues were dedicated to clinical activities at local hospitals. Last featured in *MMJ* in September 1974, St. Agnes Hospital was the focus of the June issue. The articles and the Hospital's 128-year history reflect its continuing commitment to the health care needs of its community. In honor of the Centennial of The Johns Hopkins Hospital and School of Medicine, the April *MMJ* featured fifteen articles showing the present generation of physicians and scientists who are continuing the Hopkins tradition of excellence. In July, the growth and diversification of Baltimore County General Hospital during the past twenty-five years were highlighted in nine manuscripts. The Greater Baltimore Medical Center also celebrated its twenty-fifth anniversary in 1990, and the articles in the October issue outlined its services and advancements in technology and patient care.

The February issue, "AIDS: Living Long Living Well," presented thirteen articles and commentaries exploring both traditional and less established approaches to the treatment and prevention of AIDS. It has become one of the most requested issues of the journal.

Med Chi's Physician Rehabilitation Committee coordinated the production of the November issue, "Helping is our Business." The articles addressed physician addiction to pharmaceuticals, the effects of physician impairment on the family, and programs that identify and assist physicians experiencing problems.

There were twelve Editorial Board meetings during this period. A total of 145 manuscripts were reviewed, a twenty-seven percent increase over 1989. Ninety-five manuscripts were accepted, twenty-nine were not approved, two were withdrawn, and three were referred to the Faculty's new practice management publication, *Physician's Practice Digest*.

The remaining sixteen are manuscripts on which the Board requested revisions, but which have not yet been resubmitted. In addition, five Letters to the Editor were submitted, three of which were accepted.

The fourth annual Best Article Award was presented to Gerald A. Glowacki MD at Med Chi's Semiannual Meeting in September. Dr. Glowacki was chosen for his excellent treatise, "Estrogen Replacement Therapy: Risk/Benefit Ratio for Treatment," which appeared in the July 1989 issue.

The Editorial Board is most grateful to those specialists who graciously contributed their time and expertise in the reviewing of manuscripts. The following physicians assisted in *MMJ*'s review process during 1990: John G. Bartlett MD, Marian Damewood MD, Peter Hartman MD, Eugene Katz MD, Herman C. Maganzini MD, and Anthony Tommasello MD.

Total page count for Volume 39 was 1,136 (up 22 pages from the previous year). Distribution averaged 7,735 per month, up from 7,600 in 1989. Advertising space averaged 35 percent throughout the year, an increase from 33 percent in the previous year. Postage, paper and production costs continued to rise but income kept pace.

As always, those associated with the production of the *Maryland Medical Journal* appreciate the careful attention of individual department editors who monitor their columns for scientific accuracy and correct citations.

The Editorial Board encourages Med Chi members to communicate regularly and often about any and all facets of the publication.

Victor R. Hrehorovich MD, Editor

Henry P. Laughlin MD, ScD, ScSD, Associate Editor

DeWitt E. DeLawter MD

Barton J. Gershen MD

Elmer Hoffman MD

Advisory Member

Carmine M. Valente PhD

Kevin Scott Ferentz MD

Fred J. Heldrich MD

## Maryland Medical Political Action Committee

Mr. President and Members of the House of Delegates:

**D**uring 1990, the Maryland Medical Political Action Committee (MMPAC) enjoyed a very high level of success and influence. Of the candidates supported by MMPAC, 96 percent won their races for the Maryland Legislature. The *Baltimore Sun* and the *Washington Post*

have reported MMPAC to be the most influential political action committee in the State.

Government is very much a part of the practice of medicine. Medical decisions are shaped by policy set by the legislators in Washington and Annapolis. We must work hard to influence those legislators, and we need all physicians as members.

Candidate support is central to MMPAC's existence, and political education is also very important. Both require substantial funding.

Please join today! The dues of \$100 will make you a member of both AMPAC (American Medical Political Action Committee) and MMPAC. Your future practice of medicine may depend on it.

I would like to thank all the members of the Committee for their time and effort. I would also like to add that it is with the greatest sorrow that the Committee mourns the passing of one of its members, Aris T. Allen MD. He is sorely missed.

Harold B. Bob MD, Chairperson

Aris T. Allen MD

Raymond M. Atkins MD

Albert L. Blumberg MD

John W. Clark MD

Michael R. Dobridge MD

Mrs. Josie Figueroa

Joseph J. Harrison CPA

Frederick J. Hatem MD

Reynaldo L. Lee-Llacer MD

John T. Lynn MD

J. David Nagel MD

Susan W. Owens MD

Marvin Schneider MD

Roland T. Smoot MD

Mrs. Carol Allen

Bessie Blair

Mrs. Vicki Cameron

Daniel DeVito

Mrs. Eva Edmonds

Susan R. Guarnieri MD

Catherine Hasernus MD

Bernard S. Kleiman MD

Mayer C. Liebman MD

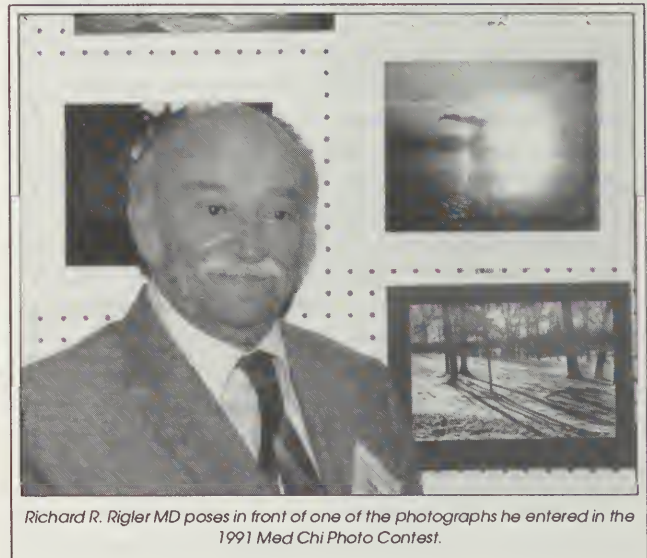
George S. Malouf, Sr. MD

Hiroshi Nakazawa MD

Gary L. Rosenberg MD

Mrs. Nancy Lee Smoot

Jose M. Yosuco MD







Prince George's County Executive Parris Glendening (r) presents Med Chi President Reynaldo L. Lee-Llacer MD with a Proclamation for "Doctors Week in Prince George's County." (See House of Delegates Minutes)

## Maternal Welfare Subcommittee

Mr. President and Members of the House of Delegates:

The Maternal Welfare Subcommittee began its 1990-1991 year by increasing awareness of the problems associated with transmission of the hepatitis B virus. The Subcommittee printed information in the *Maryland Medical Journal* about the Department of Health and Mental Hygiene's (DHMH's) Hepatitis B Perinatal Prevention Program. The primary objective of this program is to prevent morbidity and mortality due to perinatal transmission of the virus. The Subcommittee also sent information about the program to nurse midwives in Maryland.

This year, the Subcommittee also addressed issues surrounding perinatal and maternal mortalities. The Subcommittee is presently pursuing activities related to the review of perinatal and maternal mortalities in the State. The purpose of these reviews is to target specific problems and address them in an educational format.

On the legislative front, the Subcommittee reviewed SB 162, an abortion bill passed by the Maryland Legislature. Committee members reviewed the parental notification aspects of the bill along with the language concerning viability of the fetus, abortion, and referral procedures. The Subcommittee chose not to provide written guidance to physicians practicing in this area since the members determined that the language in the statute was sufficiently clear and self-explanatory.

With regard to SB 615 (State Commission on Infant Mor-

tality), the Subcommittee reviewed the bill and supported the purpose of the Commission which is to reduce infant mortality in the State.

On the national level, the Subcommittee members familiarized themselves with the federal government's latest efforts at reducing infant mortality. The Health Resources Services Administration has targeted funds for reducing infant mortality. These funds will be distributed to ten cities that qualify for this new federal Healthy Start Program. Baltimore City qualifies for the program and Subcommittee members have recommended that Med Chi support the City's efforts to obtain this federal funding.

The Subcommittee is looking forward to another productive year aimed at improving the quality and delivery of health care with regard to maternal welfare issues.

Harrold T. Elberfeld MD, Chairperson

Joyce M. Boyd MD  
John A. Hawkinson MD  
Russell W. Moy MD  
James L. Rivers MD

Phillip J. Goldstein MD  
Timothy R.B. Johnson MD  
David A. Nagey MD

## Liaison Committee with the Medical Assistance Program

Mr. President and Members of the House of Delegates:

During the 1990-1991 year, the Liaison Committee with the Medical Assistance Program focused on all of the issues surrounding implementation of the Maryland Access to Care (MAC) program. MAC is a program of managed care which is mandatory for certain Maryland Medicaid recipients. Under this program, a primary medical provider is responsible for coordinating all of the eligible recipient's health care.

One of the first items addressed by the Committee was the concern expressed by emergency room physicians that the MAC program would violate provisions of the Consolidated Omnibus Budget Reconciliation Act (COBRA) which contains a provision that patients can not be refused care simply because of their insurance status. The Committee was able to verify that the MAC program would not violate COBRA since, in fact, similar emergency room triage has been going on in other states for a number of years. Furthermore, the Department of Health and Mental Hygiene (DHMH) contacted a law professor specializing in COBRA issues and was

informed that the regulations of the MAC program would not violate any COBRA provisions.

Through the Committee's efforts, in conjunction with Med Chi's Executive Committee and Council, emergency room physicians' fees were increased. The increase is to be implemented concurrently with the increase in fees for primary care physicians under the MAC program.

In conjunction with DHMH, the Committee also provided continued support for and input into Med Chi's promotion of the MAC program. Mailings were sent to physicians alerting and informing them of the MAC program and encouraging them to sign up. MAC information and applications were made available at regional meetings. Information about the program was also disseminated in the *Maryland Medical Journal*. The Committee is proud to report that Med Chi's efforts at promoting this program, which will reduce medical costs and increase quality of care, resulted in over 1,400 physicians signing up to become primary care providers. Because of this participation, the MAC program was granted a waiver from the federal government.

Committee members provided input into the regulations drafted for the MAC program by providing staff participation at MAC Advisory Committee meetings held at DHMH.

At the present time, the Committee is continuing to work with DHMH to address physician concerns or inquiries about the MAC program. The program will officially begin on September 1, 1991. At that time, the increased fee schedule will go into effect and claims review will begin.

While much of the Committee's work was related to issues surrounding the MAC program, the Committee did review other Medicaid issues. In particular, Committee members addressed the following problems:

## ■ Computerized Medication Information Provided to Medicaid Patients But Not Provided to Treating Physicians

Conversations with DHMH revealed that this initiative was an educational effort to make the frail elderly more conscious of the need to inform their physicians of *all* of the medications they are taking. Confidentiality precluded DHMH from making this information available to the primary physician. Under the MAC program, this information can and will be provided to the primary physician.

## ■ Difficulty with the Provider 800 Information Line

DHMH immediately corrected 800 line problems as soon as it was made aware of them.

## ■ Updated Eligibility Requirements for Medical Assistance and Pharmacy Assistance

The updated eligibility information was printed in the *Maryland Medical Journal*.

## ■ Pharmacy Rebates

DHMH informed the Committee about pharmaceutical companies that had signed up for the rebate program under the Omnibus Budget Reconciliation Act of 1990 (OBRA 90). This information was sent to the component medical societies for dissemination to their membership.

## ■ Voucher Visits

Problems with voucher visits were presented to DHMH. DHMH is resolving this matter with the Department of Social Services.

## ■ Processing of Nursing Home Claims

DHMH is pursuing the issue of nursing home claims processing with Blue Cross/Blue Shield of Maryland. The matter was also referred to the Committee on Managed Care and Third Party Liaison for its input.

In the next year, the Committee will continue its efforts with the MAC program and will work with DHMH to assist physicians with issues concerning Medicaid.

Gary L. Rosenberg MD, Chairperson

Carla S. Alexander MD  
Marsha Brown MD  
Irvin B. Kaplan MD  
Selvin Passen MD  
John H. Sadler MD  
Reed A. Winston MD  
Joseph W. Zebley MD

Joseph F. Bowes MD  
Steven G. Gevas MD  
Eugene H. Owens MD  
Anthony Perlman MD  
Arnauld F. Scafidi MD  
Johnny T. Yap MD

## Advisory Members

Mary Mussman MD  
Lawrence R. Payne

Joseph W. Millstone  
Nelson J. Sabatini



Gary L. Rosenberg MD moderates the session on the Maryland Access to Care program.



## Subcommittee on Medical Radiation Technologist Regulations

*Mr. President and Members of the House of Delegates:*

**D**uring the 1990-1991 year, members were appointed to the Public Health Committee's Subcommittee on Medical Radiation Technologist Regulations. This Subcommittee was given the charge to evaluate the regulations concerning certification of medical radiation technologists and submit its recommendations to the Public Health Committee for presentation to the Executive Committee.

The Subcommittee was composed of a cross section of physicians whose practices included x-ray procedures. The twelve physicians appointed to the Committee specialized in Family Practice, Rheumatology, Internal Medicine, Pulmonary Diseases, Cardiovascular Diseases, Diagnostic Radiology, Nuclear Medicine, Gastroenterology, Otorhinolaryngology, Allergy, and Orthopedic Surgery. The Subcommittee thoroughly reviewed and evaluated the regulations concerning Certification of Medical Radiation Technologists and Nuclear Medical Technologists (COMAR 10.32.10), along with comments submitted by Med Chi physicians.

In considering the impact of the regulations on patient care, the Subcommittee addressed the following issues: exposure risk to patients and operators of x-ray equipment; the complexity of x-ray procedures; the availability of training programs and certified technologists; State inspection procedures; State requirements concerning x-ray equipment, shielding, exposure and film development; expediency of test results; and the lack of documentation at the State level about patient problems with office x-rays.

As a result of the Subcommittee's deliberations, it recommended that temporary certification be extended to those individuals who qualified and that a category entitled "x-ray assistant" be incorporated into the regulations. Under this category, an x-ray assistant would be an individual who is under the direct supervision of an office physician and who assists the physician in the performance of x-ray examinations that would *not* include fluoroscopy, invasive radiology, nuclear medicine, computerized and non-computerized tomography, radiation therapy, mammography, or xerography.

The Subcommittee's recommendations were forwarded to the Public Health Committee which strongly endorsed the recommendations and presented them to the Executive Committee. The Executive Committee approved of the recommendations and forwarded them to Israel H. Weiner MD, Chairperson, Board of Physician Quality Assurance (BPQA), for consideration as amendments to COMAR 10.32.10. Furthermore, a survey of 850 physicians with x-ray equipment in their offices was conducted to determine how these physicians viewed the impact of the current regulations on the quality of patient care and accessibility to care. Preliminary results revealed that the majority of physicians indicate that the current regulations would produce: a negative impact on their ability to diagnose and effectively treat patients; a negative effect on expediency of test results; and a negative effect with regard to the quality of care. These results were reported to all of the members of the BPQA on March 27, 1991 during a formal presentation of Med Chi's recommendations by J. David Nagel MD, Med Chi's President-elect; Herman C. Maganzini MD, Chairperson of the Public Health Committee; and Michael A. Sauri MD, Chairperson of the Subcommittee.

Legislative efforts in this area included amending HB 408 to incorporate the recommendations suggested and approved by Med Chi and presented to the BPQA. Under HB 408, the BPQA is directed to study and develop a proposal for an x-ray assistant classification in consultation with Med Chi and the Maryland Radiology Society. Toward this goal, the Subcommittee remains active.

The Subcommittee extends its appreciation to the Public Health Committee and the Executive Committee for their support and guidance over the past year.

*Michael A. Sauri MD, Chairperson*

*Richard Colgan MD*

*Harry C. Knipp MD*

*Edward S. Mehlman MD*

*Juan M. Pardo MD*

*Stanley M. Silverberg MD*

*Robert B. Stoltz MD*

*John C. Gordon MD*

*Daniel C. McCabe MD*

*Francis D. Milligan MD*

*Henry Roth MD*

*Ronald C. Sroka MD*



Loyola alumni reminisce with the President of Loyola College in MD at the Med Chi Prayer Breakfast. (l to r) J. David Nagel MD, Father Joseph A. Selinger, Rose Matricciani, and Louis Breschi MD.

## Committee on Medicine and Religion

*Mr. President and Members of the House of Delegates:*

The Medicine and Religion Committee was pleased to sponsor the Prayer Breakfast at the Annual Meeting held at the University of Maryland, Center of Adult Education, College Park, MD. The Reverend Joseph A. Sellinger SJ, President of Loyola College of Baltimore, presented a thought-provoking address on meeting the needs of youth in our society as they face the 21st century.

*Leslie R. Miles, Jr. MD, Chairperson*

<i>Merrill I. Berman MD</i>	<i>Hector L. Feliciano MD</i>
<i>Julia A. Haller MD</i>	<i>Alfred L. Klein MD</i>
<i>Robert E. May MD</i>	<i>Robert J. McAllister MD</i>
<i>Rhodora C. Tumanon MD</i>	<i>Gibson J. Wells MD</i>

## Medicolegal Committee

*Mr. President and Members of the House of Delegates:*

The Medicolegal Committee, sponsored jointly by the Medical and Chirurgical Faculty of Maryland and the Maryland State Bar Association, has continued its work in bringing the medical and legal professions closer together. The Committee rendered advisory opinions on complaints from both disciplines.

The Cochairpersons of the Committee thank the Committee members for their assistance and support during the past year.

*George H. Greenstein MD, Cochairperson*

*Jeffrey Shane, Esquire, Cochairperson*

<i>Minda Ancheta-Datoc MD</i>	<i>Raymond F. Caplan MD</i>
<i>Linda DeFeo MD</i>	<i>Rafael C. Haciski MD</i>
<i>J. D. Hills MD</i>	<i>Eli M. Lippman MD</i>
<i>Allan H. Macht MD</i>	<i>Robert E. Martin MD</i>
<i>Julius S. Piver MD</i>	<i>Guillermo Sanchez MD</i>
<i>James E. Smith, II MD</i>	<i>Bryan Bolton, Esquire</i>
<i>Augustus Brown, Esquire</i>	<i>Raymond DiBiagio, Jr., Esquire</i>
<i>Peter Engel, Esquire</i>	<i>Bayard Z. Hochberg, Esquire</i>
<i>Charles Kennan, Jr., Esquire</i>	<i>Jonathan Schochor, Esquire</i>
<i>Steven R. Smith, Esquire</i>	<i>Jack C. Tranter, Esquire</i>
<i>Patti G. West, Esquire</i>	

## Committee on Mental Health

*Mr. President and Members of the House of Delegates:*

It is with deep regret that the Committee on Mental Health reports the passing of its Chairperson, Kenneth L. Malinow MD, on April 6, 1991. Dr. Malinow's wisdom and guidance will be sorely missed.

The Committee held four meetings during the past year. There were two major activities. The first was the submission of articles to the *Maryland Medical Journal* for publication consideration. A goal of the Committee has been to improve communication and collaboration between psychiatrists and other physicians in Maryland via the column, "Today's Psychiatry," in the *Maryland Medical Journal*.

The second activity was the cosponsorship of the presentation, "Current Treatment of Anxiety and Insomnia - Clinical and Epidemiological Aspects," with the Maryland Psychiatric Society at Med Chi's 193rd Annual Meeting. The presentation was well-received.

The Committee looks forward to a productive 1991-1992 year.

*Kenneth L. Malinow MD, Chairperson, May 1990 - May 1991*

*Edward L. Suarez-Murias MD, Acting Chairperson*

<i>Arnold Brenner MD</i>	<i>Lino Covi MD</i>
<i>Juhi F. Nayeem MD</i>	<i>Betty W. Robinson MD</i>
<i>Edward T. Schnoor MD</i>	<i>Leonard M. Zullo MD</i>

## Music Medicine Clearinghouse Committee

*Mr. President and Members of the House of Delegates:*

During 1990-91, the Music Medicine Clearinghouse Committee, which held three meetings, continued to move forward.

This past year, the Committee changed status from an ad hoc to a standing committee. Staff prepared a packet for the Executive Committee containing the new committee charge, an outline of the history of music medicine, a list of Clearinghouse users, a list of performing arts medicine clinics, the Clearinghouse bibliographies, and other information. The Committee's recommendation to the Executive Committee



was passed by the House of Delegates at the Semiannual Meeting in September.

In January, the Committee recommended that its name be changed to the Committee on Medicine and the Performing Arts, broadening its charge beyond the oversight of the Clearinghouse. The House of Delegates approved these editorial changes at the Annual Meeting in May.

In June, the Clearinghouse Coordinator contributed a paper at the Special Libraries Association (SLA) annual conference in Pittsburgh. The presentation, "The Music Medicine Clearinghouse--An Interdisciplinary Resource," provided a history of the Clearinghouse's development, described its services, and outlined its plans for the future.

In July, the Committee Chairperson wrote a letter to each state medical society and selected specialty societies, asking whether they had a committee concerned with music or arts medicine. Of approximately twenty specialty societies, only the American College of Occupational Medicine indicated it had a section or committee devoted to arts medicine. Neither the American Medical Association nor any other state medical society had such a committee.

Ties with the Peabody Conservatory's Office of Career Planning were maintained and talks with a newly appointed faculty committee from Towson State University's Music Department were begun. Staff from the music medicine clinics being developed at Children's Hospital and Sinai Hospital expressed interest in working with the Clearinghouse on future activities. During late summer, the Committee began liaison activities with other local organizations interested in arts medicine.

Clearinghouse staff examined several grant possibilities. The SLA's Awards Committee indicated an interest in Clearinghouse activities. Staff are also considering a grant application to the National Library of Medicine. A potential joint project between Med Chi and the International Arts-Medicine Association, funded by the National Endowment for the Arts, was explored.

In October, Clearinghouse staff were moved to a different part of the building and are now closer to the collection. Committee members assisted with refiling and reorganization. The acquisition of a second computer for Library Technical Services resulted in more computer time for Clearinghouse tasks. During this same period, Committee Member Jeffrey Palmer MD converted a portion of the bibliographies to a dBase program.

In March, the Clearinghouse celebrated *Music In Our Schools Month* with posters throughout the building, several informal flute recitals, and displays in the Krause Room. On March 7, a brown bag open house was held in conjunction with the viewing of the *World's Largest Concert* which was

sponsored by the Music Educators National Conference. A small group of physicians and musicians discussed the current state of music medicine locally, as well as prospects for the future.

For the third straight year, the Clearinghouse participated in the Faculty's Annual Meeting. The session was entitled "Upper Extremity Problems in Student Musicians: Diagnosis, Treatment and Prevention." Ralph Manchester MD of Rochester, NY discussed the prevalence and incidence of various problems and the prescribed treatments. Virginia Moratz OTR of Baltimore focused on physical and occupational therapies and instrument adaptations.

The year ended with many plans for the future. The Clearinghouse Coordinator submitted an abstract to be considered for the next *Symposium on Medical Problems of Musicians and Dancers* in Aspen. Staff began work on the SLA's Special Projects grant application. Communication from Hunter Fry MD (a recognized authority on overuse injuries) regarding his visit to the Baltimore/Washington area next January prompted renewed interest in a mini-symposium. The Peabody Conservatory, Towson State University, Sinai Hospital, and Children's Hospital have offered to assist Med Chi with planning such a meeting.

John B. DeHoff MD, Chairperson

Emidio A. Bianco MD

Leo M. Rozmaryn MD

Advisory Member

Jeffrey Palmer MD

Harold B. Bob MD

Charles E. Silberstein MD



Med Chi Music Medicine Clearinghouse Coordinator Susan E. Harman (left) met with speakers, Ralph Manchester MD and Virginia Moratz OTR, for the "Upper Extremity Problems in Student Musicians."

## Nominating Committee

*Mr. President and Members of the House of Delegates:*

**T**he Nominating Committee recommended the following slate of candidates for presentation to the House of Delegates on Wednesday, May 8, 1991. (Those elected will assume office for one year at the conclusion of the 1992 Annual Meeting unless otherwise indicated.)

### ■ President-Elect *1991-1992*

Jose M. Yosunico MD  
Baltimore, *Baltimore City*

### ■ First Vice President

Gary L. Rosenberg MD  
Baltimore, *Baltimore City*

### ■ Second Vice President

Benjamin Maldonado MD  
Upper Marlboro, *Prince George's County*

### ■ Third Vice President

Alex Azar MD  
Salisbury, *Wicomico County*

### ■ Secretary

Albert L. Blumberg MD  
Baltimore, *Baltimore County*

### ■ Treasurer

Lawrence H. Fink MD  
Laurel, *Montgomery County*

### ■ Committee on Scientific Activity *(6-year Term)*

Esther Edery, MD  
Towson, *Baltimore County*

### ■ Finney Fund Committee *(5-year Term)*

Daniel C. Finney MD  
Baltimore, *Baltimore City*

### ■ Delegates to the AMA

*January 1, 1992 - December 31, 1994*

J. David Nagel MD  
Lutherville, *Baltimore County*

*January 1, 1992 - December 31, 1994*

Marvin Schneider MD  
Wheaton, *Montgomery County*

*January 1, 1992 - December 31, 1994*

Lawrence H. Fink MD  
Laurel, *Montgomery County*

### ■ Alternate Delegates to the AMA

*January 1, 1992 - December 31, 1994*

Raymond M. Atkins MD  
Baltimore, *Baltimore City*

*January 1, 1992 - December 31, 1994*

Alex Azar MD  
Salisbury, *Wicomico County*

*January 1, 1992 - December 31, 1994*

Reynaldo L. Lee-Llacer MD  
Clinton, *Prince George's County*

*1991 Annual Meeting - December 31, 1992*

Clinton Leinweber MD (Resident)  
Bel Air, *Harford County*

### ■ Board of Physician Quality Assurance *(3 Vacancies: 4-Year Term, 6/30/91 - 6/30/95)* *(1 Vacancy: Unexpired Term to 6/30/92)*

Faculty Bylaws require that a minimum of twice the number of nominees shall be submitted as there are seats to be filled.

Reynaldo L. Lee-Llacer MD (GS)  
Clinton, *Prince George's County*

Francis C. Mayle, Jr. MD (N)  
Bethesda, *Montgomery County*

Susan W. Owens MD (EM)  
Randallstown, *Baltimore County*

K. George Dritsas, MD (VS,GS)  
Baltimore, *Baltimore City*

Suresh C. Gupta MD (IM, PUD)  
Mt. Ranier, *Prince George's County*

Neil Novin MD (GS, ON, VS)  
Lutherville, *Baltimore City*

Cheryl E. Winchell MD (FP)  
Gaithersburg, *Montgomery County*



R. Marshall Ackerman MD (ORS)  
Rockville, *Montgomery County*

Mary M. Newman MD (IM)  
Baltimore, *Baltimore City*

Karakat S. Gokulanathan MD (PD)  
Lantham, *Prince George's County*

Raymond T. Atkins MD, Chairperson

Ephraim B. Barzaga MD

Allan D. Jensen MD

David W. Fricke MD

Vincent O. Casibang

Lee Roy G. Jones MD

Louis C. Breschi MD

Nelson G. Goodman MD

Jeffrey F. Witte MD



Reynaldo L. Lee-Llaser MD (l) and J. David Nagel MD (r) present a Certificate of Appreciation to AMA President C. John Tupper MD.

### Occupational Health Committee

*Mr. President and Members of the House of Delegates:*

**T**he Occupational Health Committee met four times during the 1990-1991 year to discuss items related to occupational medicine.

The Committee continued its efforts to obtain data from Worker's Compensation Insurance Carriers on the treatment of lower back pain. Seven insurance companies were surveyed. The data were reviewed for possible guidelines for length of treatment for lower back pain.

Efforts were also made to change the regulations in the State code regarding Worker's Compensation. The areas of concern were: (1) approval of treatment in a defined time frame for disputed treatment and (2) payment from insurance carriers to providers in a defined time frame.

The Committee invited the Chairperson of the Medical Fee Guide Advisory Committee to report on the history, continued interest, and progress of the revision of the *Medical Fee Guide*.

The Committee sponsored a scientific session at the 1991 Annual Meeting of Med Chi. The session, "Shift Worker Injuries and Sleep Physiology," was designated as the George M. Boyer MD and McKendree Boyer MD Memorial Lecture. Those attending showed much interest.

The Committee looks forward to the coming year and will strive to provide appropriate education to physicians and the public. The Chairperson appreciates the dedication of the Committee members and Med Chi staff.

Kenneth R. Lippman MD, Chairperson

Joel L. Falik MD, Vice Chairperson

Michael E. April MD

James Frenkil MD

Roman A. Goy MD

Christian Jensen MD

John T. Lord MD

Emmanuel M. Maniago MD

James R. Nethercott MD

Norman B. Rosen MD

Henry M. Scagliola MD

Michael K. Spodak MD

Timothy D. Baker MD

Georgina Y. Goodwin MD

Thomas E. Hobbins MD

James P. Keogh MD

Ferdinand G. Mainolfi MD

Robert W. Marcus MD

Michael D. Potash MD

Henry S. Sabatier MD

George W. Settle MD

Edwin W. Whiteford MD

### Peer Review Committee

*Mr. President and Members of the House of Delegates:*

**T**he Peer Review Committee met ten times during the past year to carry on its work of evaluating physician practice patterns for the Maryland Board of Physician Quality Assurance (BPQA).

In addition to record reviews, personal interviews, and on-site visits to physicians' offices, Committee members attended monthly meetings to participate in the discussion and resolution of cases. Often the work of the members does not end with the conclusion of the Committee's investigation, since additional record reviews and meetings with members of the Attorney General's staff to prepare cases for legal action also may be required.

Due to the large volume of cases referred for investigation over the past two years, a significant backlog existed at the beginning of this year which has now been completely eliminated. To achieve this, sixty-two medical record reviews, twenty-five office visits, and eight interviews were

conducted resulting in seventy-six completed reports submitted to the BPQA.

In addition to eliminating the backlog, the Committee chose to concentrate on quality assurance by upgrading written reports and conducting comprehensive, focused reviews in a timely manner.

The Committee regularly employs nonmember physicians as specialty consultants and, recently, the Attorney General's office requested that at least three specialists participate in each review. Therefore, the Committee needs additional reviewers and welcomes any volunteers who wish to assist in this important work.

My sincere thanks to the dedicated members of this Committee, to our many specialty consultants, and to the Med Chi staff for their support and assistance during this past, very busy year.

*Sidney B. Seidman MD, Chairperson*

*Fritz Apollon MD  
Lewis M. Burdette MD  
Augusto R. DeLeon MD  
William N. Fitzpatrick MD  
Bernard A. Heckman MD  
A. Clarke Holmes MD  
James W. Karesh MD  
Alfred L. Lapin MD  
George S. Malouf, Jr. MD  
Stanley L. Minken MD  
Paul D. Sullivan MD  
Richard L. Wolfe MD*

*Anir S. Banisar MD  
David M. Cook MD  
Liebe S. Diamond MD  
John G. Frizzera MD  
Charles F. Hobelmann MD  
Victor R. Hrehorovich MD  
Charles W. Kinzer MD  
M. Isabelle MacGregor MD  
Eugene R. McNinch MD  
Jerome P. Reichmister MD  
Larry G. Tilley MD*

## Peer Review Management Committee

*Mr. President and Members of the House of Delegates:*

**T**he Peer Review Management Committee (PRMC), in existence since June 1989, has continued its function of overseeing the peer review process, as specified in the *Peer Review Handbook for Maryland*. The Committee meets monthly and is responsible for the following duties:

- Receive and record cases referred to Med Chi by the Board of Physician Quality Assurance (BPQA).
- Identify the guidelines used in conducting the review.
- Refer cases to the appropriate medical review committee.

- Develop and maintain a monitoring procedure allowing for the immediate determination of the status of a peer review complaint and ensuring that the review is completed in a timely manner.
- Review reports received from investigating committees to determine their adequacy.
- In the event the Committee finds a report inadequate, to specifically identify the inadequacies in writing and return the report to the review committee.
- Transmit adequate reports to the BPQA.
- Forward a copy of final disposition reports received from the BPQA to the appropriate medical review committee.
- Identify areas in which medical review committees need education and arrange to have the necessary education provided.
- Provide organizational assistance to any medical review committee in Maryland.
- Periodically meet with the BPQA to decide what kinds of statistical information are needed by the BPQA, Faculty, and component societies to aid in evaluating and upgrading the review process.

Med Chi has distributed the recently developed *Peer Review Handbook for Maryland* to all components and existing peer review committees.

During 1990-1991, the BPQA worked diligently to eliminate its backlog and so did Med Chi. Med Chi review committees completed a combined total of 335 cases.

Because of the importance of investigations by physicians of the same specialty, PRMC made a special effort to involve more specialty societies in the peer review process. Several societies have expressed an interest in participating in the investigative process and in acting as consultants to standing peer review committees.

As a subcommittee of the Peer Review Management Committee, the Committee for Focused Professional Education continued its work under the Chairpersonship of Ronald J. Cohen MD. A plan for a professional educational program prototype was developed. The subcommittee is now a standing committee and the program is functioning. The program adds an option that was not formerly available to the BPQA. Until now, the BPQA was restricted either to punitive action against the physician, or to no action at all. In the course of peer review, aspects of medical practices may be identified that might be substandard, but which are of an overall quality that it would be inappropriate to take action against the physician's license. Although peer review committees often



make recommendations for changes in a physician's practice, subsequent reviews might reveal that insufficient change has occurred. The focused professional education program gives a physician who is weak in a specific area the opportunity to improve his/her practice habits.

The Chairperson thanks all the members of the Committee and the Med Chi staff for their efforts and support which ultimately enabled the PRMC to make a significant contribution to the efficacy and fairness of the review process.

*Emidio A. Bianco MD, Chairperson*

*Ronald J. Cohen MD*

*Karakat S. Gokulanathan MD*

*Francis C. Mayle, Jr. MD*

*Mark S. Seigel MD*

*Pablo E. Dibos MD*

*Jesse M. Hellman MD*

*David S. McHoll MD*

*Karl H. Weaver*

## Ad Hoc Committee on Physician Licensure Regulations

*Mr. President and Members of the House of Delegates:*

On March 12, 1991, the Maryland Board of Physician Quality Assurance (BPQA) asked Med Chi to solicit physician reaction to proposed changes in physician licensure regulations. In response, Med Chi formed an Ad Hoc Committee on Physician Licensure Regulations to review and make recommendations regarding the proposed regulations as they pertain to the licensure and license renewal of all Maryland physicians. The Committee was charged to make recommendations that will continue to ensure quality patient care without placing undue restrictions on physician licensure.

The Committee met twice in April and agreed that several proposed provisions were excessively intrusive. It was the consensus of the Committee that the BPQA is seeking information from applicants applying for license renewal that goes beyond what is reasonable or appropriate. The Committee indicated ways in which to limit the scope of these provisions. It also suggested that the application process conform more closely to the hospital credentialing process developed by Healthcare Credentials Verification, Inc.

Preliminary comments were submitted to the Chairperson of the BPQA and the Chairperson of BPQA's Physician Licensure Committee.

*Gary L. Rosenberg MD, Chairperson*

*Jeffrey A. Abend MD*

*Vijayan Charles MD*

*Suresh C. Gupta MD*

*Ben Oteyza MD*

*Sheldon B. Bearman MD*

*Esther Edery MD*

*Raymundo S. Magno MD*

*Donald S. Stepita MD*

## Physician/Patient Relations Committee

*Mr. President and Members of the House of Delegates:*

The Physician/Patient Relations Committee continues to investigate individual complaints against physicians involving standards of medical care, including health claims arbitration cases and fee disputes. These complaints are investigated at the request of the Board of Physician Quality Assurance (BPQA), and the Committee submits its findings and recommendations to the BPQA for consideration and disposition at the completion of each investigation. During the past year, sixty-one completed reports were submitted to the BPQA.

In addition to conducting investigations, Committee members and staff respond to daily inquiries on the practice of medicine and related issues. This activity is an important part of the Committee's goal to improve communications and enhance relations between physicians and their patients.

The dedication and commitment of Committee members and staff to the continuation and improvement of the peer review process is deeply appreciated.

*Lois E. Wehren MD, Chairperson*

*Ida Adamo MD*

*Jack D. Francis MD*

*Gay M. Guzinski MD*

*Norris L. Horwitz MD*

*Danilo G. Lee MD*

*Michael S. Madeloff MD*

*Martin B. Middleton MD*

*Benjamin Rothfeld MD*

*W. Haddox Sothoron MD*

*Lionel A. Desbordes MD*

*Mary B. Gorman MD*

*Joseph H. Hooper MD*

*Thomas E. Hunt MD*

*Robert A. Liss MD*

*Raymundo S. Magno MD*

*Albert Nahum MD*

*Lex B. Smith MD*

*James G. Zimmerly MD*



*Auxiliary President Josefina D. Figueroa (l) and AMA-ERF Chairperson Elizabeth A. Linhardt compare notes at the 1991 Annual Meeting*

## Committee on Physician Rehabilitation

*Mr. President and Members of the House of Delegates:*

**T**he 1990-91 period was a productive, evolutionary year for the Committee on Physician Rehabilitation.

In concert with the Committees on Drugs and on Alcoholism and Chemical Dependency, the Committee sponsored a highly successful two-day conference, "Practical Clinical Management: Drug Abuse Education for the Primary Care Physician," on October 20 and 21, 1990. An excellent monograph of this program is available through Med Chi's Physician Rehabilitation Program Public Relations Coordinator.

The Committee expanded the Physician Rehabilitation Program by hiring additional staff. This allows more outreach to the Maryland medical community. Presentations are being made to hospital medical staffs throughout the State. Future outreach efforts will include component and specialty societies. Overall, the presentations have been fairly well-received though some resistance continues to be encountered on this sensitive issue.

The measure of effectiveness of the outreach efforts lies in the number of "concern calls" received. A concern call or referral to the Program initiates the investigation process. In the first quarter of 1991, there was a 31 percent increase in referrals over the last quarter of 1990 and a 50 percent increase over the first quarter of last year. Even if the referral rate levels off at its current rate, there will still be a 20 percent increase across the year.

There will also be a favorable impact on the quality of medical care for more patients as a direct result of the increasing number of physicians the Physician Rehabilitation Program is able to get into treatment.

The significant expansion in referrals can also be attributed to public relations efforts. The charter edition of the newspaper, *Straight Forward*, that informs and educates physicians and other allied health professionals on issues of substance abuse, was published in 1990. Also, the November 1990 issue of the *Maryland Medical Journal* was coordinated by the Physician Rehabilitation Committee.

Advertisements in the *MMJ*, the distribution of almost 100,000 copies of *Straight Forward*, and the excellent reviews of the drug conference held last October, have all been positive mechanisms to enhance awareness of the Program.

The Committee's latest endeavor is the rehabilitation of

Maryland physicians through the Focused Professional Education Program. It is aimed at assisting physicians who are in need of educational rehabilitation in order to keep, obtain, or re-attain their medical license.

The final offering for the 1990-91 year was the panel discussion, "To Test or Not to Test," at the Annual Meeting in College Park. The session was well-attended. The topic of whether or not to drug-test physicians resulted in a lively discussion.

The Physician Rehabilitation Committee is pleased with the changes made in the past year and looks forward with anticipation to continued growth during the next year.

*Stanley R. Platman MD, Chairperson*

*William E. Abramson MD  
Morris Z. Effron MD  
Georgina Y. Goodwin MD  
Donald Harting MD  
Robert R. Kent MD  
Edward J. Kowalewski MD  
Robert M. Marine MD  
Patricia A. McIntyre MD  
Edson B. Moody MD  
Michael Radulovic MD  
Edward T. Schnoor MD  
Raymond A. Wertheim MD*

*Frederick P. Alpern MD  
Juan G. Gan MD  
Cyril G. Hardy MD  
Beadia H. Hill MD  
Ramesh K. Khurana MD  
Mrs. Virginia Levickas  
Dan H. McDougal MD  
Donald C. Meek MD  
Claro L. Pio Roda MD  
Richard H. Schlottman MD  
Maxwell N. Weisman MD  
Curtis Wright MD*

## Policy and Planning Committee

*Mr. President and Members of the House of Delegates:*

**D**uring the 1990-1991 operational year, the Policy and Planning Committee held one Committee meeting and one subcommittee meeting.

On March 21, 1991, the full Committee met for the purpose of developing a future agenda involving the governance and administration of the Faculty. Subjects discussed were:

- *Communication* within Med Chi and external to the Faculty.
- *Lines of authority*, particularly those of the President and Chairperson of Council.
- *Length of office terms* as one year may be insufficient.
- *Revitalization of the House of Delegates* as the House appears to be ceremonial only.
- *State regionalization* which may increase the interest of the smaller counties and provide stronger representation from rural areas.



- *Committee activity.* Increase committee involvement and control committee actions through the Executive Committee by having each Executive Committee member review the activity of specific committees.
- *Vice Presidential structure* as the current structure appears to be of little value.
- *Election of certain officers.* For example, elect the Secretary and Treasurer for the current term and not for a year in the future.
- *Establishment of a Council Steering Committee* to represent the interests of the smaller components.
- *Election or appointment of a House of Delegates and/or Council* which would provide an opportunity to develop leadership.
- *Establishment of an off-site Executive Director's position* for the smaller components.
- *Use of the American Medical Association's (AMA's) governance structure as a model* for Med Chi.
- *Compartmentalization* of the House of Delegates.

The Committee moved to address each issue separately by placing each issue on an agenda for review and comment at its next meeting. To carry out this objective, the Chairperson appointed a subcommittee which included Drs. Dobridge, Blumberg, Breschi, Fastow, and Rosenberg.

The subcommittee met on April 25 to review the many issues discussed earlier. It decided to ask each individual subcommittee member to put in writing his own recommendations for organizational and governance changes. The subcommittee is scheduled to reconvene on June 12, 1991 to consider each recommendation and formulate subcommittee recommendations for a full Committee meeting to be scheduled at a later date.

*Michael R. Dobridge MD, Chairperson*

### Executive Committee

Raymond M. Atkins MD  
Lawrence H. Fink MD  
J. David Nagel MD  
Marvin Schneider MD

Harold B. Bob MD  
Reynaldo L. Lee-Llacer MD  
Gary L. Rosenberg MD  
Jose M. Yosuco MD

### Council Members

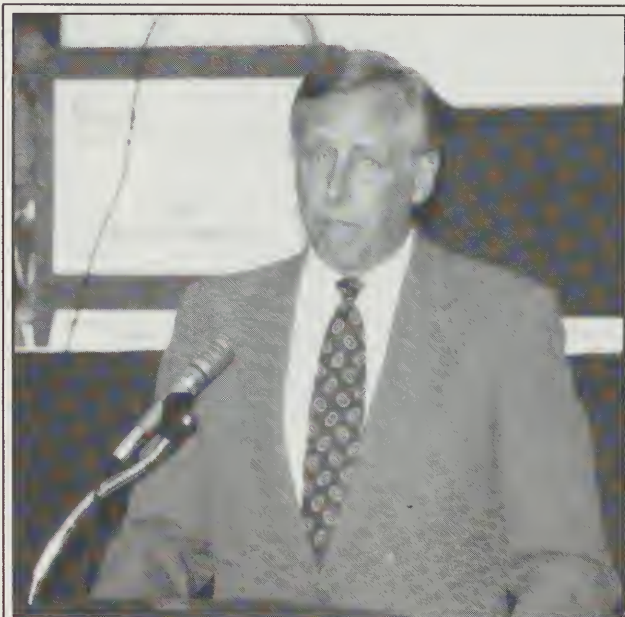
Louis C. Breschi MD  
George S. Malouf, Sr. MD

Susan R. Guarnieri MD  
Joseph Snyder MD

### Members-at-large

Albert L. Blumberg MD  
Henry P. Laughlin MD, ScD, ScSD  
Paul A. Stagg MD

Joseph S. Fastow MD  
Wayne C. Spiggle MD



*The Honorable Steny Hoyer (D-MD) addresses Med Chi's House of Delegates on "Health Care Issues of the 1990s."*

## Committee on Professional Ethics

*Mr. President and Members of the House of Delegates:*

**T**he members of the Committee on Professional Ethics have been active in a variety of ways this past year in helping to educate the medical community about the ethical responsibilities pertaining to physicians, other health care practitioners, and the public.

The Committee has revised or developed ethical opinions related to the responsibility of physicians to patients in regard to contractual agreements, euthanasia, agreements restricting the practice of medicine, gifts to physicians from industry, and the use of trade names by physicians.

The Committee completed an update of the *Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland*, effective August 1990. The *Compendium* is presented in a format allowing for supplemental updates.

An educational program was sponsored by the Committee at the Faculty's Annual Meeting in May on "Durable Powers of Attorney and Living Wills." The purpose of the panel was to discuss the use of these tools in assuring patient control over medical decisions in the event of disability.



Committee on Professional Ethics Chairperson Louis C. Breschi MD (right) receives a Certificate of Appreciation from President Reynaldo L. Lee-Llacer MD.

The Chairperson would like to express his thanks to the members of this Committee who have devoted countless hours to the important work of this Committee.

Louis C. Breschi MD, Chairperson

Cheryl E. Winchel MD, Vice Chairperson

Edilberto Beltran MD

Albert H. Dudley, III MD

Eugene Guazzo MD

Don M. Long MD

Benjamin Rothfeld MD

Vincent O. Casibang MD

Deogracias V. Faustino MD

Stephen N. Jones MD

Leslie R. Miles, Jr. MD

## Professional Review Organization Monitoring Committee

Mr. President and Members of the House of Delegates:

At the beginning of the 1990-1991 year, the Professional Review Organization (PRO) Monitoring Committee vigorously addressed the pilot project for office-based reviews (DEMPAQ) proposed by the Delmarva Foundation for Medical Care, Inc. (DFMC). (DFMC is the Medicare peer review organization for Maryland and Washington DC.) DEMPAQ is a three-year demonstration project funded by the Health Care Financing Administration (HCFA) to develop tools to review the care given to Medicare beneficiaries in physicians' offices. The DFMC's proposal was in response to a Congressional mandate to HCFA to develop a system to review office-based care.

The Committee began its review of the project by inviting the DFMC to make a presentation at the Faculty building. Further efforts in this area concerned obtaining and reviewing the technical information of the project, reviewing the American Medical Association's (AMA's) evaluation of the project, attending joint meetings of the Maryland Society of Internal Medicine with DFMC representatives and the chief investigator for the project, and engaging in ongoing dialogue with Maryland physicians, project investigators, and DFMC representatives. The Committee continuously updated the Executive Committee and Council on the project.

Since family practitioners, internists, and general practitioners were being asked to participate in this pilot project, the Committee asked the DFMC to verify that participation was strictly voluntary. Furthermore, the Committee made the DFMC aware of its concerns over the long-range implications and far-reaching consequences of office-based reviews. Confidentiality of patient records was discussed with the DFMC. The Committee strongly supported continuing medical education (CME) credits for physicians who volunteered to participate in the pilot project.

As a result of the Committee's efforts in this area, Med Chi's President, Reynaldo Lee-Llacer MD, appointed the Committee's Chairperson as Med Chi's physician consultant to the DEMPAQ project. As physician consultant, the Chairperson will be providing input into the design of the review and critiquing various aspects of the project.

Information about the DEMPAQ project was sent to all component and specialty societies. Furthermore, the Committee has prepared an article on the DEMPAQ project for publication in the *Maryland Medical Journal*.

Another area of concern to Committee members was the issue of representation on the Board of Directors of the Delmarva Foundation for Medical Care, Inc. Although the DFMC conducts PRO reviews of all participating physicians in Maryland, its Board only includes representation from the Eastern Shore and the District of Columbia. Therefore, the Committee recommended, and Council approved, that DFMC give consideration to a geographically-balanced membership on its Board. The Committee pursued this issue and on April 19, 1991, the DFMC's Board agreed to offer a voting seat to a non-Eastern Shore physician in Maryland. The Board also agreed that geographic representation should occur for Maryland by rotating nominations every year or two to represent the four remaining geographical areas of western, central, southern, and northern Maryland.

As part of its educational and informational responsibilities, the Committee disseminated information about the



DFMC's sanction process to component and specialty societies. An article on how to respond to a PRO quality inquiry was also published in the *Maryland Medical Journal*. In addition, individual physicians were provided with this information so they could understand the sanction process under the Third Scope of Work.

During the past year, the Committee has reviewed sanitized patient medical records sent by physicians expressing concern about the actions taken by the DFMC. Committee members thoroughly reviewed and evaluated the cases and notified the concerned physicians of their recommendations. The Committee, with Executive Committee and Council approval, also corresponded directly with the DFMC concerning specific cases.

Because of the Committee's efforts on behalf of Maryland physicians, the Committee's bylaws were changed to more accurately reflect the Committee's activities. The new bylaws allow the PRO Monitoring Committee to respond in a timely manner to inappropriate actions taken by the DFMC against physicians.

In April, the DFMC presented a preview of HCFA's Fourth Scope of Work contract. The Fourth Scope of Work is set to be implemented in Maryland on April 1, 1992. The Committee is actively monitoring issues related to the Fourth Scope of Work and will be keeping Med Chi informed of the specific activities related to this next phase of PRO review.

The PRO Monitoring Committee has begun a project by which parameters will be established to act as a model for the review of medical charts by review agencies. Many of the problem cases reviewed by the Committee were not related to errors in judgment but rather to the methodology of the reviewing agents.

The PRO Monitoring Committee is looking forward to another productive year addressing the concerns of Maryland physicians as they relate to peer review activities.

The Committee also looks forward to a good working relationship with the DFMC under the leadership of Christian E. Jensen MD, MPH, Corporate Medical Director.

The PRO Monitoring Committee would like to express its appreciation to the Executive Committee and Council for their support during this past year. The Committee also appreciates the assistance of the Maryland Society of Internal Medicine with regard to the DEMPAQ project.

Robert Ruderman MD, Chairperson

Augusto R. DeLeon MD  
Vernon M. Gelhaus MD  
Roland Imperial MD  
Karl F. Mech, Jr. MD  
Richard T. Scholz MD  
Frederick Wilhelm MD

Marion Friedman MD  
David B. Glasser MD  
John B. MacGibbon MD  
Julian W. Reed MD  
Karl H. Weaver MD  
Edward J. Wolfe MD



Robert Ruderman MD (r) accepts a Certificate of Appreciation from Reynaldo L. Lee-Placer MD for his activity as Chairperson of the PRO Monitoring Committee.

## Committee on Public Health

Mr. President and Members of the House of Delegates:

During the 1990-1991 year, the Committee on Public Health tackled a variety of public health issues.

### ■ Tobacco Legislation

The Committee began its session by reviewing the implications of various bills related to cigarettes and tobacco. The Committee's deliberations resulted in the support of these bills with certain modifications assuring that revenues generated from increased taxes be placed in health care programs addressing medical problems related to tobacco use. As a result of the Committee's recommendations, Med Chi's Council supported the anti-tobacco legislation with the proposed modifications. Furthermore, Committee members attended a Med Chi rally in Annapolis to demonstrate their support and offer testimony for this legislation. At the suggestion of a Committee member, cards were handed out to Maryland legislators listing the House and Senate bills that Med Chi supported with regard to anti-tobacco legislation. These cards asked the legislators to join with Med Chi's physicians and vote for legislation that would benefit the health of the citizens of Maryland.

Because of the support for the anti-tobacco legislation, the Committee also addressed the issue of making the Faculty building smoke-free for all meetings and events. The Committee recommended that Med Chi adopt a *no smoking* policy for all of the Faculty's buildings.

### ■ Technologist Certification

The Committee was also charged with the responsibility of reviewing the Maryland regulations concerning certification of medical radiation technologists and nuclear medical technologists. The Committee recommended, and Council approved, that a subcommittee be appointed to evaluate the regulations and submit a report to the Committee for its consideration and for later presentation to Med Chi's Executive Committee. Therefore, a subcommittee was appointed with Michael A. Sauri MD as Chairperson. This subcommittee thoroughly reviewed and evaluated the regulations and considered the input provided by Med Chi physicians. The Committee also conducted a survey of physicians' offices containing x-ray equipment to determine how those physicians perceived the regulations would impact on their practices. After deliberation in subcommittee and at the Public Health Committee level, the subcommittee recommended that Med Chi propose the creation of an "x-ray assistant" category for staff who perform simple routine procedures in physicians' offices, and that the certification period be extended for office personnel who qualified for temporary certification. The Faculty adopted this position and Herman C. Maganzini MD, Chairperson of the Public Health Committee, Michael A. Sauri MD, Chairperson of the subcommittee, and J. David Nagel MD, Med Chi President-elect made a presentation before the Board of Physician Quality Assurance. Further efforts in this area involved amending a mammography bill to reflect the creation of an x-ray assistant category and to allow for extension of temporary certification for individuals employed in this capacity as of August 1, 1988.

### ■ Laboratory Regulations

The Committee on Public Health also received the charge to review Maryland's laboratory regulations. Although the Clinical Laboratory Improvement Act of 1988 (CLIA-88) regulations had been withdrawn by the federal government, Maryland's laboratory regulations were not withdrawn. Numerous physician complaints and concerns about Maryland's laboratory regulations prompted Med Chi to address this issue in a definitive manner. Specifically, a subcommittee of the Public Health Committee was appointed and chaired by Carol W. Garvey MD. The subcommittee thoroughly reviewed and evaluated the laboratory regulations with input provided by Maryland physicians. Careful deliberation of access issues, quality of care concerns, and cost effectiveness led the subcommittee to recommend regulatory changes. These recommendations were wholeheartedly endorsed by the Public Health Committee and forwarded to the Executive Committee for approval. The recommendations were approved and sent to Jack

DeBoy DrPH, Assistant Director, Laboratories Administration, Department of Health and Mental Hygiene (DHMH), for his department's consideration. Furthermore, Med Chi's Council demanded that full implementation of the laboratory regulations be withheld until a more reasonable and fair method of inspection and certification could be devised. Med Chi, with the assistance of Committee and subcommittee members, is continuing a dialogue with the Laboratories Administration on this matter.

### ■ Health Insurance Reform

Another very important issue facing the Committee was health insurance reform. The Chairperson, Herman C. Maganzini MD, is the State Coordinator for the American Medical Association's (AMA's) Health Access America program which offers proposals for extending access to affordable health care, controlling inappropriate health care cost increases, and sustaining the Medicare program. After reviewing the AMA's program, the Committee recommended and the Council approved, supporting the Health Access America program. The Chairperson has described the Health Access America program at various functions throughout the State.

In conjunction with reviewing the Health Access America program, the Committee also reviewed the joint interim recommendations of the Governor's Commission on Health Care Policy and Financing and the Committee on Uninsured Persons and Uncompensated Care. The Committee on Public Health noted that many of the recommendations were similar to those made in the Health Access America program. The Committee is in the process of reviewing and evaluating all of the recommendations. The Committee also discussed the implications of HB 1120 which passed the Maryland legislature and provided a minimum benefits package to employers with at least two but not more than twenty-five employees. The Committee will continue to pursue these issues and make appropriate recommendations.

### ■ Immunizations

In the area of immunizations and infectious diseases, the Committee addressed the recent outbreak of measles in the Philadelphia area and the possibility of an outbreak of measles in our State. In its effort to assist Maryland physicians, the Committee recommended, and Council approved, that Med Chi join forces with DHMH and the Maryland Chapter of the American Academy of Pediatrics to publicize the fact that persons born after 1957 should be immunized with a second dose of the measles-mumps-rubella (MMR) vaccine. Activities continue in this area.

The four subcommittees of the Committee on Public Health (Immunizations and Infectious Diseases Subcommit-



tee; Infant, Child and Adolescent Health Subcommittee; Maternal Welfare Subcommittee; and Sports Medicine Subcommittee) provided valuable input on pertinent subjects. All of the subcommittees will continue to actively pursue issues and make recommendations to the Executive Committee and Council.

The Committee on Public Health appreciates the efforts expended by Committee, subcommittee, and special subcommittee members. The Committee would also like to thank the Executive Committee and Council for their support and guidance throughout the year.

*Herman C. Maganzini MD, Chairperson*

*William A. Andersen MD*

*John B. DeHoff MD*

*Vincent D. Fitzpatrick MD*

*Gerard M. Lowder MD*

*Hilary T. O'Herlihy MD*

*Marcel E. Salive MD*

*Annelies S. Zachary MD*

*Joyce M. Boyd MD*

*Alan N. Dennis MD*

*John M. Krager MD*

*Janet W. Neslen MD*

*J. Courtland Robinson MD*

*Mehdi L. Yeganeh MD*

### Chairpersons of Subcommittees

*Robert J. Ancona MD, Immunizations and Infectious Diseases*

*Neil J. Barkin MD, Sports Medicine*

*Harold T. Elberfeld MD, Maternal Welfare*

*Carol W. Garvey MD, Laboratory Regulations*

*Michael A. Sauri MD, Radiation Technologist Regulations*

*Eugene K. Sussman MD, Infant, Child and Adolescent Health*

## Public Relations Committee

*Mr. President and Members of the House of Delegates:*

**I**n an effort to encourage physician involvement and enhance the physician's image within local communities, the Public Relations Committee began a new public relations effort called the Doctor/Lawyer/Teacher Partnership Against Drugs in May 1990. Through this joint program with the Maryland Bar Association (MBA), doctor/lawyer education teams visited area schools to talk with students about the medical and legal dangers of drug and alcohol use in an attempt to discourage them from using drugs.

Med Chi and the MBA initiated a pilot program last May, based on a model established by the American Medical Association (AMA) and the American Bar Association (ABA), at the Nicholas Orem Middle School in Hyattsville, Maryland. Valerie Siegal Esq., an Assistant State's Attorney, and Kevin Hennessey MD, a neurologist, met with two classes of students from the seventh and eighth grades. The initial program was well-received by students, teachers, and administrators from Prince George's County.



*Don DeVito MD talks with seventh graders about the medical hazards of drug abuse as a physician volunteer in the Doctor/Lawyer/Teacher Partnership Against Drugs.*

Med Chi and the MBA gained approval for the doctor/lawyer team visits by Maryland State Board of Education officials in August 1990 and announced the initiation of the program at a press conference on September 25, 1990. Governor William Donald Schaefer attended the conference to show his support for the program and remarked that the Partnership represents an outstanding example of volunteerism in the local community.

### ■ Partnership Program Recruitment and Training

In September 1990, the Public Relations Committee invited all component societies to participate in the program and asked each component society president to appoint a county coordinator. In October, all county coordinators were invited to attend a joint meeting with their MBA counterparts in Hagerstown, Maryland. During this meeting, physician leaders for the program met with their lawyer counterparts and discussed possibilities for the program in their communities.

The Committee began actively recruiting physician volunteers for the program from October through December 1990. In January 1991, all doctor and lawyer volunteers in Baltimore City were invited to attend one of four training sessions held on January 9, 16, 28 and February 25 at Med Chi. During the sessions, Andrea Bowden of the Baltimore City school system's Office of Science and Health identified several strategies for talking to children about drugs. Jamey Hochberg Esq. and Valerie Siegal Esq. spoke about their experiences in talking with students.

Following each session, Med Chi's Statewide Program Coordinator, Hiroshi Nakazawa MD, met with physicians to review

talking points and information from the National Institute on Drug Abuse. The program in Baltimore City spanned from February 21 to April 19, 1991. During that period, more than fifty doctor/lawyer teams visited a total of 4,600 students in 153 classes at thirty-eight schools.

Prince George's County also initiated training sessions for doctors and lawyers. Physicians and lawyers met with over 1,500 students during their visits to over fifty-four classes in twenty-one schools across the county.

Currently, more than 250 physicians statewide have volunteered to participate in the Doctor/Lawyer/Teacher Partnership Against Drugs. The Eastern Shore, and Kent, Worcester, and Caroline Counties reported that doctor/lawyer teams have visited schools in their communities. In western Maryland, Frederick County physicians have visited several schools. The Public Relations Committee plans to initiate training sessions in Carroll County in the future. In southern Maryland, over sixteen doctor/lawyer teams entered several schools in Anne Arundel County. Harford County doctors and lawyers sent teams to more than twenty classes in the county and spoke with over 600 students. In Baltimore County, physicians have met with school representatives and intend to launch a pilot program in Dundalk, Dulaney Valley, and Towson area high schools. The program has been very well-received by physicians, lawyers, teachers, and students in most every county.

### ■ Partnership Program Promotion and Media Coverage

To help create a lasting impression of the visit, Med Chi's Physician Rehabilitation Program produced picture frame magnets and posters with the slogan, "You're Good. Too Good for Drugs." These are distributed by the doctor/lawyer teams during their schools visits. Physicians can request these magnets to give to students and can order posters to be placed in schools and in their offices. Both the magnets and posters are aimed at reminding people, especially the young, that they do not need to start taking drugs and that support systems are available to help them avoid making the wrong decisions.

Media coverage of the program has been outstanding. Stories regarding the program have appeared in several newspapers around the state including the *Baltimore Sun*, the *Washington Post*, *Prince George's Sentinel*, and the *Frederick Post*. Channel 13 (WJZ-TV) aired the press conference with Governor Schaefer on September 25, and both Channel 13 and Channel 2 (WMAR-TV) aired stories about a doctor/lawyer visit to a Baltimore City school on April 9. During the week of May 18-24, Channel 24 (WHSW-TV) aired a five-minute segment on a doc-

tor/lawyer visit as part of "In Your Interests," a program that airs each hour. Dr. Nakazawa has appeared on two area talk shows to promote the program including WCVT-FM at Towson State University and "Consultation, with John Stupak" on WBAL-AM radio.

In addition to media coverage, the program was honored with a special award from the AMA "in recognition and appreciation for the outstanding work done by its physician members in the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs Program." Med Chi presented Dr. Nakazawa with a special certificate in recognition of his outstanding efforts as Statewide Coordinator for the program.

The Public Relations Committee sponsored a session during the Med Chi Annual Meeting on the Partnership program. During the session, Hiroshi Nakazawa MD, Kevin Hennessey MD, Gary Pushkin MD, and Ms. Andrea Bowden shared their experiences about the program and encouraged other physicians to become involved.

### ■ Radio Programs

In addition to the Doctor/Lawyer/Teacher Partnership Against Drugs, the Committee continued producing two radio programs for Med Chi physicians. "Consultation, with John Stupak" is Med Chi's live call-in show heard on over fifty radio stations across the country including WNAV-AM in Annapolis on Sunday from 2:00-3:00 pm. John Stupak also hosts Med Chi's Sunday Morning "Consultation," a physician interview show on WBAL-AM radio airing at 7:00 am. Subjects discussed on the national program include topics such as acquired immunodeficiency syndrome (AIDS), nutrition, cancer, sports medicine, and headaches.

In an effort to encourage speakers to participate in the radio programs and persuade physicians to speak to public groups, the Committee ran monthly advertisements for "Consultation" and for Med Chi's Speaker's Bureau in the *MMJ*. Over fifty-five physicians currently participate as speakers on the radio programs and for the Speaker's Bureau which helps Med Chi respond to requests from the public for information on a specialty or topic.

### ■ Awards

The Committee continued to sponsor its awards programs including the Wyeth-Ayerst Laboratories Physician Award for Community Service. Formerly the A.H. Robins Award, the award is presented each year to a physician who has provided outstanding service to his or her community outside the field of medicine. Donald T. Lewers MD received the



1991 award during the Med Chi Annual Meeting for his outstanding efforts to help conserve Maryland's Eastern Shore.

The Second Annual Award for Excellence in Organized Medicine, an award created to encourage medical student involvement in organized medicine, was also presented during the Annual Meeting. Elliott E. Cazes from the University of Maryland School of Medicine and Martin J. Citardi from The Johns Hopkins School of Medicine were the recipients.

The Public Relations Committee sponsored the Eleventh Annual Photo Contest. Faculty and Auxiliary members entered over thirty-three photos which were judged by Evan Cohen, a professional photographer from Baltimore. David A. Paul MD won first place and Michael Liteanu MD won second place. All entries in the photo contest were on display during the Annual Meeting.

Certificates of Recognition were presented during the House of Delegates Session of the Annual Meeting to three physicians for their outstanding service and dedication as chairpersons of Med Chi committees. President Reynaldo L. Lee-Llacer MD presented certificates to Fred A. Gill MD, Chairperson of the Committee on AIDS; John G. Bartlett MD, Vice Chairperson of the Committee on AIDS; Sidney B. Seidman MD, Chairperson of the Peer Review Committee; and Stanley R. Platman MD, Chairperson of the Committee on Physician Rehabilitation.

This year, the Public Relations Committee successfully concentrated its efforts on a single program with the goal of enhancing the image of the physician in the eyes of the public. The Committee strongly believes the Doctor/Lawyer/Teacher Partnership Against Drugs (and programs like it) is a step in the right direction to improving the physician's image within the community. The Committee welcomes comments and suggestions from Med Chi members regarding all its activities. As Chairperson, I thank the members of my Committee whose time and effort have made this a productive year.

*Hiroshi Nakazawa MD, Chairperson*

*K. G. Dritsas MD  
Rafael C. Haciski MD  
Gary W. Pushkin MD  
Gholam R. Sadjadi MD  
Fred Magaziner DDS*

*Vincent D. Fitzpatrick MD  
Thomas F. Krajewski MD  
Ibrahim A. Razzak MD  
Mrs. Jackie Chang*

## Committee on Scientific Activity

*Mr. President and Members of the House of Delegates:*

**T**he Committee on Scientific Activity had seven meetings during this past year. Recommendations to the Executive Committee included adoption of a guide for joint sponsorship of programs which would include policies and procedures. This was accepted. Copies are now available for distribution to all applicants seeking joint sponsorship of continuing medical education (CME) activities by Med Chi. The Committee was integrally involved in the planning, presentation, and evaluation of twenty-three jointly sponsored activities during this reporting period.

The 1990 Semiannual Meeting was held at the Carousel Hotel and Resort in Ocean City, September 14 to 16. The keynote speaker, American Medical Association (AMA) Trustee Robert McAfee MD, addressed the opening session on the topic of "Will We Care About Caring?" Also featured was a symposium on "Maryland Access to Care" with presentations by Mary Mussman MD and Nelson Sabatini of the Maryland Department of Health and Mental Hygiene.

The 1991 Annual Meeting was held at the University of Maryland, University College, Center of Adult Education, College Park, May 8 to 10. Highlights of the program included presentations by Lt. Governor Melvin Steinberg; The Reverend Joseph A. Sellinger SJ, President, Loyola College in Maryland; C. John Tupper MD, AMA President; and Congressman Steny Hoyer.

On behalf of the Committee on Scientific Activity, I wish to express my appreciation to each member and to the staff of Med Chi for their contribution of time and effort in making these programs and activities so well-received and worthwhile.

*Ernest E. Harmon, Jr. MD, Chairperson*

*Benjamin V. DelCarmen MD      Gershon Efron MD  
Victor R. Hrehorovich MD      J. Richard Lilly MD  
Jose Martinez MD*



*More than 75 scientific and technical exhibitors were available for physicians attending this year's Annual Meeting.*

## Committee on Small Area Practice Variation

*Mr. President and Members of the House of Delegates:*

**D**uring the 1990-1991 year, the Committee on Small Area Practice Variation discussed the feasibility of continuing as a standing committee since other committees at Med Chi had been formed to address medical practice issues. Duplication of effort and coordination of activities were seriously considered and debated.

In an effort to gather information on small area practice variation activities being conducted by outside agencies, the Committee invited Daniel T. McCrone MD, President, Chief Operating Officer, and Lyn Book Starr, Manager, Systems Development, Maryland Medical Services, Inc., to make a presentation to Committee members. (Maryland Medical Services, Inc. (MMS) is the second largest subsidiary of Blue Cross/Blue Shield. It reviews medical policies and has recently taken over provider review, focusing on small area practice variation.) At the presentation, Dr. McCrone explained the study MMS conducted on the Eastern Shore that focused on the cost per claim of gastroenterologists practicing in that area. He also discussed the fact that consumer dissatisfaction and marketplace competition required that more provider information be made available to the consumer. Dr. McCrone expressed optimism that MMS and Med Chi could work together to review provider information. While Dr. McCrone's studies appeared to target only provider costs, Committee members noted that Med Chi should review identified problem areas, focusing on educating the provider population.

Other Committee activities included investigating the availability of grant money for studies on small area practice variation.

*Alex Azar MD, Chairperson*

*Timothy D. Baker MD*

*Ali Daneshvar MD*

*Frank G. Kuehn MD*

*Leonard Scherlis MD*

*Aroon Suansilppongse MD*

*Paul Burgan MD*

*James C. Gieske MD*

*David R. Morales MD*

*Ajaib S. Sidhu MD*

*Raymond A. Wittstadt*

## Committee on Specialist Identification

*Mr. President and Members of the House of Delegates:*

**T**he Committee on Specialist Identification has held five meetings this past year to implement the mandated specialist identification authority of the Board of Physician Quality Assurance (BPQA). This Committee functions as the reviewing body for the BPQA on applications received from physicians requesting designation in a particular medical specialty.

Application for specialty designation is open to all licensed physicians in Maryland. If a physician is certified by the American Board of Medical Specialists, the identification is automatically given by the BPQA upon confirmation of that credential.

If not certified by the American Board of Medical Specialists, the physician must complete an application outlining specific training and experience in the particular specialty. The applications are referred by the BPQA to this Committee for evaluation. Criteria used for such evaluation were developed jointly by Med Chi and the BPQA, and are set forth in administrative regulations (COMAR 10.32.08) having the force and effect of law. The BPQA makes the final decision on the basis of the recommendation from the Committee. The identification is permanent, and the physician may publicize himself or herself in the given area of specialty.

Much time and effort has been exerted in reviewing the 2,583 applications received thus far. Of the applications reviewed, the Committee has recommended that 166 be denied. Each application is reviewed thoroughly and fairly, and in strict compliance with the required criteria.

I wish to thank the members of the Committee for their patience in carrying out this mandated function.

*Samuel D. Friedel MD, Chairperson*

*Willarda V. Edwards MD*

*Daniel T. McCrone MD*

*B. Martin Middleton MD*

*Arthur W. Sagoskin MD*

*Donald W. Kress MD*

*Joseph S. McLaughlin MD*

*Hiroshi Nakazawa MD*

*David P. Zajano MD*



## Committee on Specialty Societies

*Mr. President and Members of the House of Delegates:*

**T**he Committee on Specialty Societies is dedicated to the review of interdisciplinary and multidisciplinary issues arising from the practice of medicine as related to each specialty. The Committee provides specialty representation on the Faculty Council (one councilor) and the House of Delegates (seven delegates, seven alternate delegates).

During this Med Chi operational year (1990-1991), the Committee held five meetings. Issues discussed varied from specialist involvement with the State peer review process, to specialty assistance, to the Medicare Program.

At the Committee meeting on May 24, 1990, the Committee reviewed previous year actions including recommendations to the Medical Director of Maryland Blue Cross/Blue Shield-Medicare concerning gastrointestinal (GI) endoscopy and noninvasive vascular testing policies, and actions of the Task Force on Psychiatric Managed Care. The Committee also reviewed the newly published *Peer Review Handbook* and discussed specialty involvement with the peer review management system. Additionally, the Committee discussed the Small Area Practice Variations Program with the Med Chi Committee responsible for that program.

The Committee did not reconvene again until September 27, 1990. At that time, it urged the Council and Executive Committee to meet with the Board of Physician Quality Assurance (BPQA) with the express purpose of clearly defining the BPQA's protocol for the handling of peer review cases to ensure that all quality of care cases are processed through the Faculty. During that meeting, the Committee also agreed to assist the Committee on Small Area Practice Variation in the performance of its endeavors. The agenda also included a review of the State health plan regulations concerning "cardiac surgery and therapeutic catheterization services" and discussions regarding a Medicaid Formulary, the Med Chi Focused Professional Education Program, specialty involvement with managed care programs, and the Maryland Health Systems Cost Review Commission's (HSCRC's) mid-night admission determination related to same day surgery procedures.

On November 15, 1990, the Committee met to review many of the issues discussed during its previous meetings.

One issue that had not been recently addressed was economic credentialing, a subject the Med Chi Committee on Hospital Medical Staffs has been following very closely and the American Medical Association (AMA) has deemed important enough to make it the subject of the Educational Session at the interim AMA-HMSS (Hospital Medical Staffs Section) Meeting in Orlando, Florida, November 29 - December 1, 1990. Other matters discussed at the November meeting included Medicare medical policy regarding pneumatic compressors (lymphedema pumps) and the appropriate specialty identification sign for display by a physician at his or her medical office.

When the Committee reconvened on January 24, 1991, it further discussed its support and willingness to participate in small area practice patterns and activities; it reviewed the status and degree of AMA interest concerning the "Definition of the Hospital Day" as it relates to same day surgery; and it continued to follow Med Chi's involvement with the Medicaid Formulary, and medical radiation technologist and laboratory regulations. At that meeting, the Committee was apprised of the *AMA News* (December 14, 1990) article, "Guidelines on Drug Industry Gifts." The Committee also drafted and submitted to Council a resolution concerning laser surgery.

At the last operational year meeting on March 28, 1991, the Committee finalized its decision regarding the specialty identification sign to be displayed by a physician in his or her office. It also continued to follow medical radiation and office-based laboratory technician regulations, the status of the Medicaid Formulary, and the progress of Med Chi's Focused Professional Education Committee. The Committee was brought up-to-date on the development and status of the Health Care Financing Administration's (HCFA's) global surgery policy wherein the bundling of surgical services for reimbursement purposes is being proposed.

*Louis C. Breschi MD, Chairperson*

*James Castellano MD  
Maurice B. Furlong MD  
Jay Gerstenblith MD  
Roman A. Goy MD  
Lee E. Gresser MD  
Bruce A. Hershfield MD  
William R. Leahy MD  
Christian S. Mass MD  
David C. Moses MD  
Lawrence C. Pakula MD  
Robert J. Spence MD  
Stuart Winakur MD*

*Enzo Cosentino MD  
Thomas R. Gadacz MD  
Edward J. Goldman MD  
Neil A. Green MD  
Robert G. Hennessey MD  
Charles F. Hobelmann MD  
Kenneth B. Lewis MD  
Dean L. Mondell MD  
Sean R. O'Brien MD  
David B. Posner MD  
Allan P. Weksberg MD*

## Ad Hoc Therapeutic and Formulary Committee

*Mr. President and Members of the House of Delegates:*

In August of 1990, an Ad Hoc Therapeutic and Formulary Committee was formed to examine the current therapeutic and formulary system associated with the State's Medical Assistance Program (MAP). Representatives from the Department of Health and Mental Hygiene (DHMH), the University of Maryland School of Pharmacy, and the Pharmaceutical Manufacturers Association were invited to attend the Committee meetings to share their perspectives and findings.

After careful deliberation, the Committee decided its objectives should include the following: (1) identify and investigate studies and reports addressing the effectiveness of therapeutic formularies; (2) urge pharmaceutical companies to offer the best price to the Medical Assistance Program through discounts and rebates; (3) plan an informational and educational campaign for physicians regarding the prescribing of less costly medications of equivalent therapeutic value; (4) support the State's Medical Assistance Pharmacy Program, recognizing that other states have moved from a restrictive formulary to an open system; and (5) ensure that any preauthorization mechanism that may be developed and approved by Med Chi be flexible enough to allow for ease of physician and patient access.

Topics for discussion have included federal legislation regarding reimbursement for prescribed drugs, preauthorization mechanisms, and proposed interventions to control medication costs in the Maryland Medical Assistance Program. After examining and discussing the available data, committee members stressed the need to work cooperatively to develop an educational program for Maryland physicians relating to appropriate cost-effective prescribing. The University of Maryland School of Pharmacy, in conjunction with Med Chi, will be developing this program.

*Richard M. Susel MD, Chairperson*

*Louis C. Breschi MD*

*James C. Kleeman MD*

*Joshua R. Mitchell, III MD*

*Gita K. Shah MD*

**Advisory Members**

*Gary L. Rosenberg MD*

*Nancy A. Yamanaka-Yuen PharmD*

*Ronald Goldner MD*

*John O. Meyerhoff MD*

*Robert Ruderman MD*

## Women in Medicine Ad Hoc Committee

*Mr. President and Members of the House of Delegates:*

During 1990-91, the Women in Medicine Ad Hoc Committee worked to fulfill its primary goal of increasing women's membership in Med Chi and encouraging women physicians to become actively involved in the leadership of organized medicine at all levels -- county, state, and national.

To achieve this goal, the Committee sponsored a reception for women physicians during the Annual Meeting in May 1991. In an attempt to persuade nonmember women physicians in Maryland to participate in organized medicine, the Committee sent invitations to all women members of Med Chi in Prince George's and Montgomery County. The invitation encouraged members to bring a nonmember to the reception.

In September 1990, the Committee mailed a memorandum and flyer promoting the American Medical Association's (AMA's) "Women in Medicine Month" to all Med Chi Component Society, Specialty Society, and Hospital Medical Staff presidents. Physicians were encouraged to invite nonmember women physicians to a special meeting at the Faculty where they could discuss problems unique to women physicians and determine ways organized medicine could help solve them.

Another major goal of the Committee is to increase the availability of childcare facilities for working physician parents. This year, the Committee focused on childcare for physician parents who are on call at hospitals. The AMA recently expressed its strong support for the development of proper childcare facilities for families of working parents and encouraged the availability of childcare facilities in or near medical centers and hospitals. At its Interim Meeting in December 1990, the AMA adopted the following recommendations relating to childcare in hospitals:

- The AMA strongly encourages hospitals to establish and support childcare facilities.
- The AMA encourages that priority be given to children of those in training (residents), and that services be structured to take their needs into consideration.
- The AMA should inform the American Hospital Association, hospital medical staffs, and residency program directors of these policies.
- The AMA should study the elements of quality childcare and the availability of childcare on a twenty-four-hour basis.





Carol Garvey MD raises several questions during the presentation on the "Maryland Access to Care Program."

In May 1991, the Committee sponsored a session during the Med Chi Annual Meeting, "Sexuality in Children." During the session, Pediatrician Joan Barkin MD provided an overview of "Sexuality in Childhood"; Psychiatrist Steven Lipsius MD gave a synopsis of "Normal Sexual Development"; and Michael Meagher MD, Clinical Assistant Professor of Psychiatry at the Georgetown University of Maryland, spoke on "Abnormal Sexual Development." The Committee hopes this and other sessions on childhood development will be beneficial to physician parents.

Other goals of the Committee include support and social groups for women physicians, seminars to help women physicians function with job and family stress, and a round table discussion by women physicians and medical students to discuss various issues perceived to be unique to working women physicians.

The members of the Women in Medicine Ad Hoc Committee thank Med Chi for the opportunity of serving on this Committee. We welcome any comments or suggestions for future activities from all physicians.

*Margaret T. Snow MD, Chairperson*

Marianne Benkert MD  
Cornelia M. Dettmer MD  
Randy Sue Ellis MD  
Mrs. Carol Muffarrij  
Martha T. Schipper MD  
Rhodora C. Tumanon MD

Jaleh K. Dae MD  
Esther Edery MD  
Hilda I. Houlihan MD  
Barbara A. Parey MD  
Beverly J. Stump MD  
H.M. Zassenhaus MD

## Committee on Young Physicians

*Mr. President and Members of the House of Delegates:*

The Committee on Young Physicians began the 1990-1991 year by reviewing Med Chi's survey of young physicians under forty years of age or in practice less than five years. This survey, which was completed by 466 young physicians, provided an overview of their problems and the services they felt Med Chi should offer to help them in their practices.

Committee discussion of the problems facing young physicians resulted in the members deciding to concentrate on increasing young physician membership by providing them with a package of services designed to meet their particular needs. These services would be offered at a discount rate as a benefit of joining Med Chi.

Committee members focused on the following issues: placement services, accounting services, computer services, billing services, practice workshops, and legal services. Committee members volunteered to gather information on the above-mentioned services and negotiate discounts for young physicians.

The Committee's present goal is to produce a brochure depicting the services that can be offered to young physicians at a discounted rate when they join Med Chi. This brochure will be presented to the Executive Committee and Council for their approval and input.

Two members of the Committee attended the American Medical Association's (AMA's) Interim Meeting in Florida, bringing back valuable information about the issues concerning young physicians at the national level. These issues will be carefully followed in the coming year.

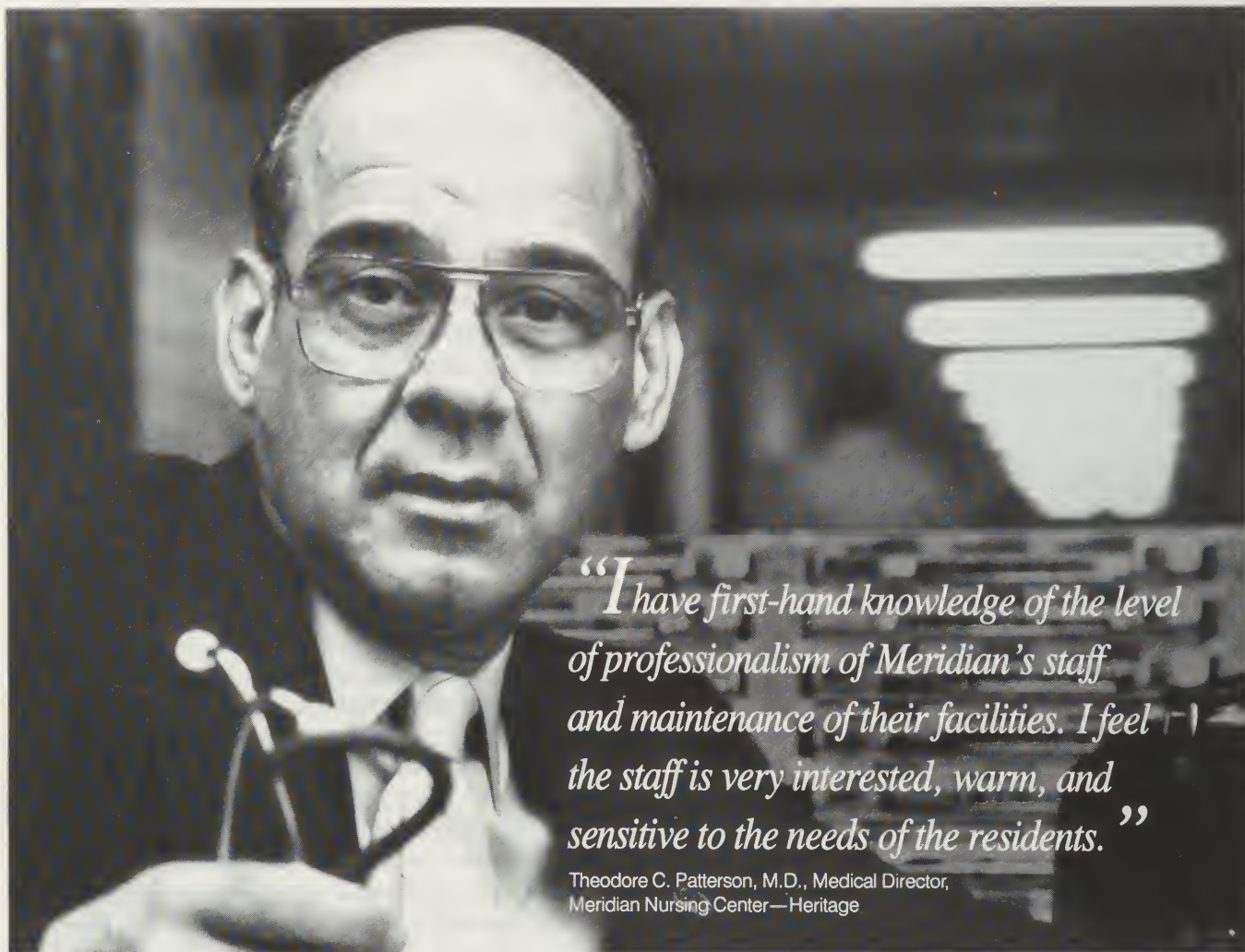
At the Annual Meeting, the Committee sponsored, "Being on the Hot Seat," -- an overview of the Health Claims Arbitration Process and demonstration of mock depositions of an expert witness and defendant physician in a medical malpractice suit.

The Committee is dedicated to assisting young physicians with their practices and stimulating interest and participation in organized medicine.

*Scott M. Rifkin MD, Chairperson*

Mary Beth Ackerley MD  
Eileen D. Ebert MD  
Randy Sue Ellis MD  
Eleanor Y. Ford MD  
F. Christian Hansen, III MD  
Mehrdad Massumi MD  
Brian E. Mondell MD  
Mark D. Noar MD  
James P. Paskert MD  
Philip L. Schneider MD  
Theresa M. Vogel MD  
Edward J. Wolfe MD

Carlos A. Alarcon MD  
Willarda V. Edwards MD  
Maen Jamal Farha MD  
Rafael C. Haciski MD  
Robert A. Kreeger MD  
Joseph F. Mayo, Jr. MD  
Robert C. Murphy MD  
Eric Alfred Oristian MD  
Marcel E. Salive MD  
Howard K. Schultz MD  
Enily J. Windham MD  
Johnny T. Yap MD



*"I have first-hand knowledge of the level of professionalism of Meridian's staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents."*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer's patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there's our full-time activity directors, social workers, and dieticians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





# DIAGNOSTIC ASSAY SERVICES



## **Specialties include:**

*Fertility Testing*

*Esoteric Steroid & Endocrine Testing*

*Infectious Disease Testing*

*Complete Allergy Testing*

**9290 Gaither Road  
Gaithersburg, MD 20877**

**D.C. Area 840-9220  
Toll Free - Nationwide - 800-638-4000**

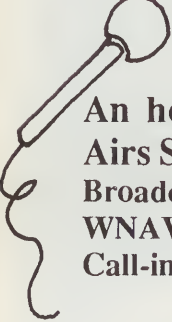
---

# Consultation

**SPEAK OUT SPEAK OUT SPEAK OUT SPEAK OUT SPEAK OUT SPEAK OUT**

Consultation, a twice-weekly radio program sponsored by the Medical and Chirurgical faculty of Maryland allows Med Chi physicians to discuss the latest developments in medicine and to answer questions about health issues.

Med Chi currently airs two sessions of Consultation weekly:



## Consultation "Live"

An hour-long program  
Airs Sunday from 2 to 3 pm  
Broadcast across the country including  
WNAV 1430AM in Annapolis  
Call-in Format



## Consultation "Pretaped"

A half-hour program  
Airs Sunday from 7:30 to 8 am  
Broadcast on WBAL- AM radio  
Interview format

Med Chi encourages all physicians to appear on these innovative programs.

-----To register, fill in the form below.-----

Name \_\_\_\_\_ Specialty \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

*Return this form to Betsy Newman, Med Chi, 1211 Cathedral Street, Baltimore, MD 21201-5585.  
For more information call 301-539-0872 or toll free in Maryland 1-800-492-1056.*





## American Medical Association - Education and Research Foundation Report

Mr. President and Members of the House of Delegates:

It is with much pleasure that I present for your consideration this report of Faculty members' contributions to the cause of Medicine in Maryland: American Medical Association - Education and Research Foundation (AMA-ERF).

The staunch support and generosity of Med Chi Faculty members certainly will be welcomed by the deans of the designated medical schools. For, as you know, the flexible funds of AMA-ERF help to sustain and maintain a degree of excellence which *all* medical schools strive to attain.

With federal and state funding at an all time low, the only foreseeable help in the form of financial assistance *must* come from the medical family, I can honestly state that loyal Faculty members have once again responded to that call.

As State Chairperson of AMA-ERF, I wish to convey my sincere, grateful thanks to each and *all*. It has been my great privilege to serve as State Chairperson for the Faculty. Thank you for this opportunity.

### ■ Faculty Contributions

June 1, 1990 - April 30, 1991

Allegany County	\$685.00
Anne Arundel County	2,060.00
Baltimore City	4,720.00
Baltimore County	3,740.00
Calvert County	140.00
Caroline County	---
Carroll County	240.00
Cecil County	140.00
Charles County	200.00
Dorchester County	80.00
Frederick County	360.00
Garrett County	100.00
Harford County	800.00
Howard County	960.00
Kent County	140.00
Montgomery County	6,690.00
Prince George's County	2,460.00
Queen Anne's County	20.00
Somerset County	---
St. Mary's County	20.00
Talbot County	620.00
Washington County	900.00
Wicomico County	1,140.00
Worcester County	40.00
Affiliates/Residents	40.00
<b>TOTAL</b>	<b>\$26,295.00</b>

### ■ Maryland Physicians' Direct Contributions

May 1990 - March 1991

\$9,976.00

Elizabeth A. Linhardt, State Chairperson



Col. Robert Fechner of the Uniformed Services University of Health Sciences thanks Med Chi and the AMA/ERF for its donation.

## Auxiliary Report

Mr. President and Members of the House of Delegates:

Maryland has thirteen component Medical Auxiliaries -- from Allegany County in the west to Wicomico County in the east. We have almost 1,300 members and have just celebrated our forty-second year.

One of the most rewarding jobs of a President is to give an account of the members' accomplishments. In keeping with the theme, "Teamwork For a Better Image," component auxiliaries have been promoting various community projects. Anne Arundel County has been maintaining the Charles Ballard Senior Center offering exercise programs to 100 senior participants. One of their members, Imelda Herzinger, received an award from the Governor for outstanding service to the community. Washington County's project, "Elder Love," a support group for people caring for elder relatives, provides forums at which caregivers may share their feelings and frustrations. This project was featured in the July 1990 issue of *Facets*, an American Medical Association (AMA) Auxiliary publication. Wicomico County has



Auxiliary Past President Victoria Cameron (left) presents outgoing President Josie Figueroa with a Past President pin.

been promoting AIDS education programs in schools. Most counties participated in "Holiday Sharing Card" for AMA-ERF (Educational Research Foundation). Through various fund-raising projects, several counties gave scholarships to students pursuing health-related careers.

Maryland's entry for Medical Heritage on the life of Dr. Walter Edward Dandy, a pioneer neurosurgeon from Johns Hopkins, won second place at the Southern Medical Association Auxiliary State Exhibits.

Past State President, Mildred Taylor, current President of the Howard County Medical Society, was elected the Northern Region Vice President of the Southern Medical Association Auxiliary.

To sustain a good working relationship with the State legislature, our annual "Auxiliary Day in Annapolis" was held January 29, 1991. Included in the agenda were legislative briefings and lunch with legislators. A resolution in recognition of the Auxiliary's contributions to health education and the promotion of quality health care was presented by Lt. Governor Melvin Steinberg.

At the Statehouse ceremony in Annapolis, March 19, 1991, the Auxiliary received a proclamation from the Governor declaring March 30, Doctors' Day. Component auxiliaries celebrated Doctors' Day in a variety of events.

In response to the AMA Auxiliary's memorandum, each member was encouraged to join the "Give a Gift of Support" project. Auxiliary members were asked to offer support to the families of physicians serving in the Persian Gulf. Special commemorative Doctors' Day postcards were sent to Maryland physicians who were part of Operation Desert Storm.

These are just some of the many activities engaged in by the component auxiliaries. Each of the thirteen counties is unique in its own way, but every component auxiliary is working toward a common goal -- promoting the theme of the year.

I would like to take this opportunity to thank you, each and every Auxiliary member.

*Josefina D. Figueroa, President*

## Executive Director's Report

*Mr. President and Members of the House of Delegates:*

With the guidance and support of its membership, Med Chi addressed many of the concerns facing Maryland physicians during 1990-1991. This report highlights several of Med Chi's accomplishments during this past year.

### ■ 1991 Legislative Session

A great majority of Med Chi's challenges occurred during the 1991 session of the Maryland General Assembly. Through the efforts of many dedicated Maryland physicians, Med Chi helped contribute to the passage of several laws benefiting the public's health. Med Chi also limited excessive government regulation of Medicine by working to defeat bills such as Mandated Medicare Assignment, triPLICATE prescriptions, and the regulation of fees of radiologists, anesthesiologists, and pathologists.

During the Session, Med Chi held its annual legislative rally to allow Med Chi physicians an opportunity to discuss their concerns about Maryland Medicine with their representatives. Lieutenant Governor Melvin A. Steinberg and Senate President Thomas V. "Mike" Miller were among the more than a dozen legislators who attended or addressed physicians in the Maryland Statehouse.

### ■ Smoking

This year's rally focused on a number of bills aimed at preventing young people from becoming smokers. In cooperation with the Maryland Chapters of the American Cancer Society, the American Heart Association, and the American Lung Association, Med Chi lobbied in support of bills to restrict minors' access to cigarettes and to increase the cigarette tax. As a result of this coordinated effort, the Legislature voted to increase the excise tax on cigarettes for the first time in ten years and to apply a State sales tax on cigarettes for the first time.

### ■ Abortion

The Legislature passed a new abortion law allowing physicians to refrain from notifying a minor's parents if the physician determines the minor is "mature and capable of giving informed consent" or if informing the parents "would not be in the interest of the minor."

Med Chi took no position on this bill but did provide information on the current abortion statute and its effects on medical practice. Med Chi published a copy of the changes made to the Maryland abortion law in the May issue of the



**MMJ.** Med Chi is currently studying the new law and plans to provide physicians with guidelines to facilitate compliance with the law.

## ■ AIDS

In February, Med Chi revised the Faculty's Position on AIDS to support legislation for mandatory testing of sources of significant HIV exposure to health care workers. Med Chi physicians testified in favor of Senate Bill 203 which provides for testing of certain individuals without informed consent in cases where patients are unable to give consent (e.g., comatose patients). As passed by the Legislature, this bill states that Med Chi, in consultation with the Centers for Disease Control, the Maryland Hospital Association, and the Department of Health and Mental Hygiene (DHMH), shall develop a practice protocol for physicians infected with HIV and submit this report to the Legislature on December 2, 1991. Med Chi will develop this protocol and present a draft report during the Semiannual Meeting in September.

## ■ Radiation Technologists

House Bill 408 introduced regulations that would have required all physicians who offer x-ray services to their patients to employ a radiation technologist. As passed, the bill includes an amendment requiring Med Chi and the Board of Physician Quality Assurance (BPQA) to create a new class of x-ray assistant who may perform simple x-rays under the direct supervision of a physician. A report on this issue is due to the Senate Finance Committee and House Environmental Matters Committee on December 2, 1991. A draft report will be presented during the 1991 Semiannual Meeting.

## ■ Mammography Screening

For the fourth consecutive year, legislation was introduced that would require physicians who perform mammography to obtain accreditation from the American College of Radiology (ACR). Med Chi opposed this legislation as originally proposed. However, as amended and passed, the bill allows for ACR accreditation and Health Care Financing Administration (HCFA) accreditation, as well as accreditation by a new program to be developed jointly by Med Chi, the Maryland Radiological Association, and DHMH. A draft of this program will be presented during September's Semiannual Meeting.

## ■ Board of Physician Quality Assurance

A bill increasing the resources for the BPQA and its case load was passed during the 1991 Session. This legislation establishes a BPQA Assurance Fund and a Board of Nursing Fund to be used to help both boards cover costs associated with fulfilling their responsibilities.

Throughout this past year, Med Chi has addressed issues of BPQA policy; physician immunity from legal action; outstanding cases at the Faculty and component societies; the mini-evaluation by the State Department of Fiscal Services; and BPQA vacancies. Physicians should note that Med Chi's position on peer review is and will remain that review of medical practices should only be done by physician peers. Med Chi will make every effort to insure that this activity remains with physicians.

## ■ Medical Assistance Program

Last year the DHMH introduced the Maryland Access to Care (MAC) program. Under MAC, physicians will provide primary medical care to Medicaid recipients. Medicaid recipients will be required to choose a physician, provider group, or clinic to serve as their primary care provider. The change in the Medicaid program represents a commitment to shift care to community providers and, at the same time, increase fees for some visits by an average of 50 percent. Thus far, Maryland physicians have strongly supported this program, verifying and reinforcing Med Chi's dedication to providing primary care to Maryland's neediest citizens.

DHMH also developed a Medicaid Funding Program to provide an additional \$70 million in support of the Medical Assistance Program.

## ■ Medicare

In addition to defeating Mandated Medicare Assignment in Annapolis, Med Chi also worked at the federal level to help eliminate superfluous government regulations in the Medicare program by supporting HR 4475, "Medicare Physician Regulation Relief Amendments." This bill would relieve physicians from several of Medicare's unnecessary administrative burdens. To show its support for this legislation, Med Chi sent letters to all Maryland U.S. Representatives.

In a related issue, Med Chi sent a letter to President Bush



Med Chi President Reynaldo L. Lee-Uacer MD (far left) and Executive Director Angelo J. Troisi FACHE (far right) escort AMA President C. John Tupper MD and his wife, Mary, to Med Chi's 193rd Annual Meeting.

calling for the dismissal of Department of Health and Human Services Inspector Richard Kusserow for his negative and reported overzealous activities in Medicare and Medicaid fraud investigations. All component and specialty societies in Maryland were encouraged to express their indignation to those methods of inappropriate investigation.

### ■ Health Access America

In response to calls for national health insurance, the AMA developed Health Access America, a program to provide access to high quality health care for all Americans at affordable prices. Med Chi has expressed its support of Health Access America and has disseminated details about the program via informative lectures throughout the State.

### ■ State and Federal Laboratory Regulations

Med Chi has been actively involved with DHMH and HCFA in the development of laboratory regulations suitable to the health care community. In April, the *Federal Register* contained proposed rules for sanctions that HCFA may impose on laboratories not meeting federal requirements. Copies of these rules were mailed to all component and specialty societies for dissemination to their members.

### ■ Liability Insurance

In December, Medical Mutual announced a 20 percent dividend credit off their total professional liability insurance premium for physicians who renew their policies in 1991. This credit, which is in addition to any other discount members may receive, is the direct result of the cumulative effects of tort reform and insurance legislation as coordinated by Med Mutual and the physicians of Maryland.

Beginning in 1991, Med Chi is cosponsoring a seminar with Medical Mutual entitled, "Medical Records: Charting a Course for the 1990s." Physicians attending this conference will receive a 5 percent discount on their 1992 Medical Mutual renewal premium.

### ■ Physician Rehabilitation

In an effort to reach all Maryland physicians, Med Chi's Physician Rehabilitation Program was expanded through an additional physician state licensure assessment. The Program now includes an outreach program, extensive drug abuse education, a program newspaper - *Straight Forward*, and focused education for physicians requiring improvement in their professional skills.

### ■ Meetings and Continuing Medical Education

In an attempt to address the concerns of physicians throughout the State, Med Chi continued its tradition of President's Regional Conferences, holding several meetings

in western, eastern, and southern Maryland. Physicians attending these meetings were provided with updates on statewide medical issues and were briefed on new Med Chi programs and events. Many of the meetings provided opportunities to obtain continuing medical education (CME) credits on a variety of medical subjects.

Med Chi's Semiannual Meeting was held September 14-16, 1990 at the Carousel Hotel and Resort in Ocean City, Maryland. AMA Trustee Robert McAfee MD, keynote speaker for the meeting, addressed the physician's commitment to providing quality care for patients. Other seminar topics included physician payment reform, the impact of regulation on physicians' offices, and the Maryland Access to Care program.

In October, Med Chi's Committees on Physician Rehabilitation and on Drugs sponsored "Practical Clinical Management: Drug Abuse Education for the Primary Care Physician." More than 300 physicians attended this conference designed to increase a physician's ability to recognize, treat, and prevent drug abuse in his or her patients. In an effort to continue drug abuse education for physicians, Med Chi published a monograph of conference proceedings and plans to offer a second drug conference in November 1991.

"American Medicine Today: Perspectives from Maryland," was the theme of Med Chi's 193rd Annual Meeting held on May 8-10, 1991 at the University of Maryland Center of Adult Education in College Park, Maryland. This year's program featured several nationally recognized guest speakers including:

- C. John Tupper MD,  
President of the American Medical Association;
- The Honorable Melvin A. Steinberg,  
Lieutenant Governor of Maryland;
- The Honorable Steny H. Hoyer,  
U.S. Representative (D, MD);
- Parris N. Glendenning,  
County Executive of Prince George's County; and
- The Reverend Joseph A. Sellinger,  
President of Loyola College in Maryland.

Maryland physicians had the opportunity to attend numerous scientific sessions and discuss important medical issues such as AIDS, the right to die, breast cancer, Medicare, Medicaid, and drugs.

### ■ Doctor/Lawyer/Teacher Partnership Against Drugs

In September, Med Chi initiated its Doctor/Lawyer/Teacher Partnership Against Drugs, a new program in which doctor/lawyer educational teams visit schools to talk with stu-



dents about the medical and legal dangers of drug and alcohol use. In the spring of this year, more than 7,000 students across the State were visited by more than 250 physician and lawyer volunteers. In May, AMA President C. John Tupper MD presented Med Chi with a special award for this program.

#### ■ Physician's Practice Digest

In October, Med Chi introduced the *Physician's Practice Digest* (PPD), a new quarterly publication to meet a physician's practice management needs. The publication was met with an overwhelmingly enthusiastic response from the membership. In May, the PPD won a special award in the Sandoz Pharmaceutical National Competition for Excellence in Medical Journalism.

On behalf of all Med Chi staff, I would like to express our thanks to all the physicians who have actively participated as Med Chi members. Your contributions to Med Chi will help create a bright future for the Maryland Family of Medicine.

Angelo J. Troisi FACHE, Executive Director

## House of Delegates Report -- 1990 Interim Meeting of the AMA House of Delegates

Mr. President and Members of the House of Delegates:

The American Medical Association (AMA) House of Delegates met in Orlando, December 2-5, 1990. This was the busiest House meeting on record with 194 resolutions and 106 Board and Council reports to consider. The House adopted policy on a wide variety of national issues of critical importance to the practicing physician and the American public.

There were 435 delegates seated. The House composition was:

- 348 delegates representing state medical associations;
- 77 delegates representing national medical specialty societies; and
- ten delegates representing medical students, resident physicians, hospital medical staffs, medical schools, young physicians, the Army, the Air Force, the

Navy, the United States Public Health Service, and the Veterans Administration.

#### ■ Address of the President

C. John Tupper MD, AMA President, gave a stirring midyear report on the AMA's many achievements in the last few months, which he termed a "veritable parade of progress."

In recalling his Inaugural Address, Dr. Tupper promised that the "new AMA would be up front, where the action is." Saying that the AMA had kept that promise, Dr. Tupper heralded many aggressive actions and a new willingness to take risks and "to stand up for our profession in many other ways when the chips are down." Topping his list were:

- the AMA's call for removal of Inspector General Richard Kusserow from his position;
- the success of AMA's Washington office staff in "looking out for the interest of our patients and in lobbying against government programs and policies that are anti-science and anti-patient";
- the stance of the Council on Ethical and Judicial Affairs on such vital issues as the physician's duty to treat HIV patients, withdrawal of life support, and other public health and public education issues;
- the AMA's leadership role in the development of practice parameters as a way of improving the quality of care patients will receive; and
- the AMA's proposal to extend quality medical care to everyone (Health Access America) has received the support of many state, county, and national specialty societies.

Declaring that "the new AMA is more effective at our number one job - the job of representation," Dr. Tupper said, "By putting together all the attributes of the new AMA -- strength, boldness, imagination, and our leadership in education and quality -- we are better able to stand up effectively for physicians and for our patients."

#### ■ AMA Budget - Fiscal Year 1991

The Board of Trustees presented the 1991 Plan and Budget calling for \$189.8 million in operating revenues and \$186.0 million in operating expenses. Budgeted income taxes and non-operating expenses of \$1.7 million and \$2.0 million, respectively, leave the Association with a bottom line of \$136,000. There will be *no* dues increase in 1991.



AMA President C. John Tupper MD presents the AMA's view of Health Access America.

The four areas of major focus for 1991 are: professionalism/standard setting, physician autonomy, the health of the public, and support and service activity.

#### ■ Gifts to Physicians from Industry

The AMA Council on Ethical and Judicial Affairs submitted its opinion on gifts to physicians from industry and provided guidelines to avoid the acceptance of inappropriate gifts. In a related report, the Council discussed the ethical issues raised by the practice of industry gift-giving including the influence on physician practices, the appearance of impropriety, and costs of gifts.

#### ■ Physician Participation in State Executions

Prompted by reports of physician involvement in an execution by lethal injection in Illinois, the House adopted a resolution that reaffirmed AMA's ethical position in opposition to physician participation in legally authorized executions, and informed state medical licensing boards and certification agencies that physician participation in lethal injection executions is a serious ethical violation.

#### ■ Denial of Payment for Preexisting Conditions

The issue of health insurance companies denying payment for preexisting conditions generated much debate in the Reference Committee. Some spoke to the detrimental impact of coverage of preexisting conditions on the fiscal viability of insurers. Others stressed the need for physicians to serve first and foremost as advocates for their patients and

encouraged the elimination of preexisting condition limitations.

The House opted to adopt a substitute resolution calling for a comprehensive study in conjunction with health insurance industry representatives, to include:

- an evaluation of administrative and marketing costs,
- the appropriateness of experience and community rating,
- exclusions from coverage for preexisting conditions and other insurance underwriting practices,
- recommendations for health insurance reform, and
- an evaluation of timely access to medically appropriate health care services and technology

A report is anticipated at the 1991 Interim Meeting.

#### ■ Department of Health and Human Services Inspector General

The delegates heard vehement and unanimous testimony reciting the numerous inappropriate and questionable activities of the Office of Inspector General of the Department of Health and Human Services (HHS) and in support of the AMA's efforts to gain the removal of Mr. Kusserow from the position.

The House adopted a resolution calling on the AMA to:

- continue its actions to seek the immediate resignation or dismissal of Richard Kusserow as Inspector General and
- to encourage state, specialty, and auxiliary organizations, as well as individual physicians to write President George Bush, Dr. Louis Sullivan, and members of Congress in an effort to effect Mr. Kusserow's ouster.

#### ■ Patient Transfer Provisions

The law (COBRA - Consolidated Omnibus Budget Reconciliation Act) setting out penalties for inappropriate patient transfers received considerable attention demonstrating a need to continue AMA activities pressing for appropriate changes in how the law is written and how the courts interpret the law, especially as it relates to malpractice cases.

The House adopted a resolution calling on the AMA to seek legal or legislative opportunities to clarify that this law applies only to inappropriate transfers from hospital emergency departments and not to issues of malpractice, and to seek appropriate modifications of the law to preclude liability for discharges from the



hospital, including the emergency department and outpatient facility.

#### ■ Electrocardiogram Interpretation

The Omnibus Budget Reconciliation of 1990 (OBRA 1990), which was recently signed into law, contains provisions eliminating a separate Medicare payment for electrocardiogram (EKG) interpretation. The House agreed to accept an emergency resolution on this issue and took action calling on the AMA to establish a high priority to effect repeal of those provisions included in the law eliminating Medicare payment in 1992 and beyond for routine reading of EKGs, where the EKG is performed and payment is made to a physician as part of a visit or consultation.

#### ■ Use of Animals in Research and Medical Education

The House approved a report from the Council on Scientific Affairs reviewing the use of animals in medical education, including the policies of many medical schools and national organizations. The Council reaffirmed the necessity for humane treatment of experimental animals used in medical education and recommended the following guidelines on the use of animals in medical school curricula: (adopted as amended)

1. Where appropriate, medical school faculty should consider using non-animal models in education activities; when animals are used in the curriculum, educational goals should be clearly stipulated.
2. Each medical school should disseminate to students before matriculation a policy statement regarding their participation in educational experiences involving animals.
3. All educational experiences involving animals should have the approval of the Institutional Animal Care and Use Committee.
4. Involved faculty should discuss with students the learning objectives of any educational experience utilizing animals, and faculty should remain available throughout the laboratory exercise for advice and guidance on the conduct of the educational experience.
5. All educational experiences involving animals should be carried out in a humane manner without inflicting pain on the animal; this includes the appropriate use of anesthetic and analgesic drugs.
6. At the conclusion of study, animals should be

euthanized in the manner described by the American Veterinary Medical Association.

The House also approved a resolution calling on the AMA to urge state and county medical societies to support the appropriate and humane use of animals in research and to help ensure the continued availability of animals for essential medical education and medical research; and to study the need for and feasibility of a permanent staff resource to coordinate the efforts of the state and county medical societies.

#### ■ Drug Abuse

The House adopted a resolution encouraging every physician to make a commitment to join his or her community in attempting to eliminate drug abuse by the year 2000.

The commitment should include involvement in at least one of the following activities:

- donating money to a drug abuse prevention program;
- donating time to talk to local civic groups, schools, religious institutions, and other appropriate groups about drug abuse;
- joining or organizing local groups dedicated to drug abuse prevention;
- talking to youth groups about brain damage and other deleterious effects of drug abuse; or
- educating and supporting legislators, office-holders, and local leaders on ending the drug abuse crisis.

#### ■ Rural Physician Shortage

The House approved a thorough and detailed report by the Council on Medical Education addressing the complex problems of providing health care services in rural areas and the shortage of physicians in rural areas.

The report presented the following recommendations calling on the AMA to:

- Encourage medical schools and residency programs to develop educationally sound, rural clinical preceptorships and rotations consistent with educational and training requirements, and to provide early and continuing exposure to those programs for medical students and residents.
- Encourage medical schools to develop educationally sound primary care residencies in smaller communities with the goal of educating and recruiting more rural physicians.

- Encourage state and county medical societies to support state legislative efforts in developing scholarship and loan programs for future rural physicians.
- Encourage state and county medical societies and local medical schools to develop outreach and recruitment programs in rural counties to attract promising high school and college students to the health professions.
- Urge continued federal and state legislative support for funding of Area Health Education Centers (AHECs) for rural and other underserved areas.
- Continue to support full appropriation for the National Health Service Corps Scholarship Program, with the proviso that medical schools serving states with large rural underserved populations should have a priority and significant voice in the selection of recipients for those scholarships.
- Support full funding of the new federal National Health Service Corps loan repayment program.
- Encourage continued legislative support of the research studies being conducted by the Rural Health Research Centers funded by the National Office of Rural Health in the Department of Health and Human Services (DHHS).
- Continue investigation into the impact of educational programs on the supply of rural physicians.
- Continue to conduct research and monitor other progress in the development of educational strategies for alleviating rural physician shortages.
- Reaffirm support for legislation making interest payments on student debt tax deductible.
- Encourage state and county medical societies to develop programs to enhance work opportunities and social support systems for spouses of rural practitioners.

#### ■ Residency/Fellowship Working Hours and Supervision

The House approved a substitute resolution asking the AMA to continue to work with the Accreditation Council for Graduate Medical Education to implement AMA policy for residency work hours reform, and to use existing policy as a guideline in working with state medical societies to obtain modification, if needed, of pending future legislation on total residency work hours, conditions, and supervision.

#### ■ National Practitioner Data Bank

The House received six resolutions about problems associated with the National Practitioner Data Bank. The Reference Committee formulated a substitute resolution that was adopted, along with a resolution submitted by the Hospital Medical Staff Section.

The delegates voted to ask the AMA:

- to continue to work with the DHHS to ensure that the National Practitioner Data Bank does not collect nor release information regarding the denial of specific clinical privileges based solely on failure to meet hospital-established minimal criteria (e.g., level of professional liability coverage, board certification) not related to a physician's competence or professional conduct;
- to continue to work with DHHS to revise the current Data Bank dispute process to accelerate a physician's opportunity to attach an explanation or statement to a disputed report;
- to work with DHHS to establish an appropriate response time for hospital inquiries to the Data Bank;
- to work with DHHS to establish a mechanism to inform physicians when an inquiry to the Data Bank has been made;
- to reaffirm its policy that reports in the Data Bank, other than licensure revocation, should be purged after five years;
- to support efforts to require the same Data Bank reporting requirements for physicians, dentists, and other licensed health care practitioners;
- to reaffirm its policy and use all necessary efforts to direct the National Practitioner Data Bank to send all notifications to physicians by certified mail, return receipt requested; and
- to use all necessary efforts at the federal level to direct the National Practitioner Data Bank to begin the sixty-day appeal process from the date the physician receives notification.

#### ■ PRO Notification of Quality Problems

The Council on Medical Service submitted a report discussing the Professional Review Organization's (PRO's) Quality Intervention Plan (QIP) and the procedures for PRO notification of quality problems. The Council submitted recommendations which were adopted after modification by the House of Delegates.



The delegates voted to ask the AMA:

- to urge the Health Care Financing Administration (HCFA) to modify regulations so that (1) in regard to confirmed quality problems which have been *finally* adjudicated by the PRO Quality Assurance Committee, the PRO is required to notify both the physician and president of the hospital medical staff in all such cases; and (2) the PRO is required to implement a mechanism to verify receipt of the PRO's notice of both potential and confirmed quality problems by the physicians;
- to seek an amendment to the PRO law to require that when the PRO review goes beyond the generic screen for review, the physician must be notified within forty-eight hours of the exact reason for said review; and
- to seek an amendment to the PRO law to repeal the existing prohibition on the release, to a PRO-proposed sanctioned physician, of documents or other information produced by a PRO in connection with its deliberation in making quality determinations.

In a related action, the House considered a Joint Report of the Council on Medical Service and the Council on Medical Education examining the implications of HCFA'S guidelines calling for PRO review and sanctions of physicians-in-training. Four resolutions on the issue were submitted.

The House adopted as amended the following recommendations of the two Councils:

- The attending of record not be assigned QIP points when the PRO, in its final determination and after consultation with the program director, has clearly identified the resident in an accredited training program as the source of the problem.
- The AMA urge HCFA to require PROs to notify the responsible training program and resident in an accredited training program as to the quality problem in patient care in instances in which a resident is deemed by a PRO to be responsible for the problem.
- When a resident is deemed by the PRO, in its final determination, to be responsible for the problem, the resident and the program director should receive corrective notification serving to initiate a specific educational corrective action plan for the resident to complete.
- When a resident in an accredited training program

is deemed by a PRO to be responsible for the problem, the AMA urges the provider's training program to develop a corrective action plan (CAP) regarding how it plans to address problems identified under the QIP, and to make the CAP available to the PRO and the accrediting body at the accreditation visit.

- While participating in an accredited training program, residents shall not be assigned any QIP points for activities within their training programs. However, medical activities outside of their training programs may be subject to QIP points.
- Corrective notifications by PROs to residents shall be used only within the training programs and shall remain confidential from all other parties.
- The AMA seek any necessary legislative and regulatory changes in the Medicare program to implement these recommendations.
- The AMA expand both its educational program for physicians on peer review and the QIP program to include residents and medical students.
- The AMA should study the impact of HCFA QIP regulations on graduate medical education.

#### ■ AIDS as a Communicable and a Sexually Transmitted Disease

Although there is still no cure, medical science has developed treatment options that can delay the conversion of a patient who is sero-positive for HIV infection to a patient who is dying from an AIDS-related disease.

With the knowledge that early detection of HIV infection



H. Frank Herling MD (r), Assistant Dean of Student Affairs, The Johns Hopkins University School of Medicine, accepts a check from the AMA-ERF.

is even more imperative than before, the House of Delegates adopted as amended, a resolution supporting "the classification of HIV (AIDS) as a communicable and a sexually transmitted disease (STD), and the control measures attendant to its classification."

The House has asked the Board of Trustees to prepare a report on the question of HIV-testing.

## ■ Resolution Submitted by the Maryland Delegation

The Maryland Delegation submitted the following resolution on "Doctor's Day in Congress" -- Resolution #121:

RESOLVED, That the American Medical Association develop a program to coordinate on a nationwide level a "Doctor's Day in Congress" whereby representatives of each state shall send delegations to Washington to meet with their congressional delegations; and be it further

RESOLVED, That the AMA provide guidelines for meetings of this type with appropriate issues to be presented to members of both the Senate and House of Representatives; and be it further

RESOLVED, That "Doctor's Day in Congress" receive appropriate publicity as to its intent to maintain the quality of medical care being delivered to the American public; and be it further

RESOLVED, That this be an annual event on a specific date each year in order that we maintain our communications as a medical profession with the individual members of Congress.

This resolution was not adopted, but was referred to The Board of Trustees for report back to the House of Delegates.

## ■ Conclusion

The meetings of the AMA House are conducted in a democratic manner. They provide those in attendance a unique educational experience since a wealth of information is disseminated and discussed. All members are encouraged to attend and participate. Any member of the AMA may present testimony to the Reference Committee and corridor discussions on the issues provide additional opportunities for members to get their views across.

If a member cannot come to the meeting, he or she can still be represented through his or her delegate. Members should let their delegation know their opinions. Members may also prepare a resolution and request that it be submitted to the House.

Many AMA policies began with an individual physician who had a good idea and coaxed it through the democratic process.

*George S. Malouf, Sr. MD, Chairperson*

*Donald T. Lewers MD, Vice Chairperson*

## Delegates

*Albert M. Antlitz MD*

*Michael R. Dobridge MD*

*Joseph Snyder MD*

*Roland M. Smoot MD*

*John H. Hebb MD*

## Alternate Delegates

*Raymond M. Atkins MD*

*Clinton H. Leinweber MD*

*J. David Nagel MD*

*Henry N. Wagner, Jr. MD*

*Alex Azar MD*

*Reynaldo L. Lee-Llacer MD*

*William David Sullivan*

# Med Chi Insurance Fund Report

*Mr. President and Members of the House of Delegates:*

**T**he Med Chi Insurance Fund Board of Directors governs the Med Chi Agency, the wholly owned subsidiary of the Faculty.

A Preferred Provider Network (PPN) was installed as an endorsed option to other health insurance available to the members. This was done in response to many requests to provide lower cost health plans. The PPN has been very successful, as many members have subscribed to the plan.

The Hartford Group Disability Plan was modified with many enhancements. The Plan now plays a partial disability benefit. It also pays when someone is engaged in rehabilitation employment. A death benefit of three times the disability is provided. Rates are reduced by 20 percent for those under age fifty, and 10 percent for those persons ages fifty to sixty-nine.

A new individual disability policy has been provided through the Monarch Life Insurance Company. Monarch is highly respected in the industry and is one of the top three nationwide companies providing disability income protection coverage.

The Med Chi Agency had a very successful year. The number of Medical Mutual professional liability policy holders was increased substantially and the volume will continue to grow in 1991 and in years ahead.

The Property and Casualty business has also increased. The products are very good and the underwriting companies are rated very high.

It was a profitable year and the membership will benefit as a result. The enthusiastic support of the membership is greatly appreciated.

*Francis C. Mayle, Jr. MD, Chairperson*

*Albert M. Antlitz MD*

*Michael R. Dobridge MD*

*J. David Nagel MD*

*Raymond M. Atkins MD*

*George S. Malouf, Sr. MD*

*Jose M. Yosuiico MD*



## Resident Component Society Report

*Mr. President and Members of the House of Delegates:*

**T**he Resident Component Society focused on legislative issues during the 1990-1991 year. Of particular concern to the membership was federal legislation addressing the issue of student loan deferment. With regard to student loan deferment, the President of the Resident Component urged residents to support HR 4690, sponsored by Representative Penny, and S 2796, sponsored by Senator Cohen, by writing their representatives and senators and asking them to cosponsor or support the bills.

The Resident Component also reviewed and discussed resident work hours and the position taken by the Resident Physicians Section of the American Medical Association (AMA). The position urged the AMA to draft and introduce model state legislation to limit residents' work hours, if by September 1, 1991 the Accreditation Council for Graduate Medical Education has not approved final work hour rules, or the nation's residency programs have not all voluntarily adopted work hours. The members are committed to following this issue closely in the coming year.

The Resident Component discussed how to motivate residents to be more active with regard to medical issues. The Component is looking forward to implementing several suggestions made by the membership to stimulate more interest and activity by resident physicians.

*Jeffrey J. Stoddard MD, President*

## Student Component Society Report

*Mr. President and Members of the House of Delegates:*

**T**he Student Component Society was proud to host and cosponsor a seminar for medical students during the 1990-1991 year. This seminar was entitled, "Medicine, Ethics, and the Law," and the program agenda included the following topics: medical ethics, standard of care, informed consent, documentation, living wills, durable powers of attorney for health care, and Health Access America. Speakers at the seminar were: David Orentlicher MD, JD,

Ethics and Health Policy Counsel, Council on Ethical and Judicial Affairs, American Medical Association (AMA); Robert J. Weierman MD, Secretary, Hospital Medical Staffs Section, American Medical Association; Jack Schwartz Esq., Chief Counsel, Opinions and Advice, Office of the Attorney General, Maryland; Melanie Smith Esq., Ethics Committee, The Johns Hopkins Hospital; and Howard L. Sollins Esq., Ober, Kaler, Grimes & Shriver, Baltimore, Maryland.

The seminar was attended by medical students from Washington DC, Maryland, Pennsylvania, New Jersey, and Virginia. This seminar was the first regional meeting of the AMA's Medical Students Section. Due to the success of this meeting and the positive reception by medical students, the Student Component is anxious to participate in further activities to educate its membership and forge relationships with medical students in the region.

*W. David Sullivan, President*

## Treasurer's Report

*Mr. President and Members of the House of Delegates:*

**T**he financial books and records of the Faculty for the year ending December 31, 1990 have been audited by the firm of Naden Lean, Certified Public Accountants.

The financial statements reflecting the financial position of the Faculty at year end 1989 and 1990 and the related statements of income, expenditures, transfers, and changes in fund balances for the years then ended are published in this journal. The auditors submitted an unqualified opinion that the financial statements are accurate and conform to generally accepted accounting principles.

The 1991 Budget was approved by Council in January and is presented in this report for information.

The investment portfolio is included in the report of the Finance Committee.

*Jose M. Yosui MD, Treasurer*

Naden  
Lean

CERTIFIED PUBLIC ACCOUNTANTS

The Medical and Chirurgical Faculty  
of Maryland  
Baltimore, Maryland

We have audited the accompanying balance sheet of the Medical and Chirurgical Faculty of Maryland as of December 31, 1990 and 1989, and the related statements of income, expenditures and transfers, and changes in fund balance for the years then ended. These financial statements are the responsibility of the Faculty's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Medical and Chirurgical Faculty of Maryland at December 31, 1990 and 1989, and the results of its operations and changes in fund balances for the years then ended, in conformity with generally accepted accounting principles.



May 17, 1991  
Lutherville, Maryland

Paul H. Naden  
Gerald H. Lean  
Ronald M. Ehman  
Allan H. Cohen  
Darryl A. Bodnar  
Timothy D. Lott  
Peter N. Berube  
Donald J. Swan

The Foxleigh Building  
2330 W. Joppa Road  
Suite 160  
Lutherville, MD 21093  
(301) 337-2727 (CPAS)

Washington, D.C.  
(301) 982-1082  
Columbia, MD  
(301) 964-8290  
Westminster, MD  
(301) 876-5800  
Fax (301) 337-8415



## BALANCE SHEET

	General Fund	Endowment and Special Funds	Plant Fund	Med Chi Insurance Fund	Restricted Fund	Total December 31, 1990	Total December 31, 1989
<b>ASSETS</b>							
Cash	\$3,767,161	\$206,132	\$ -	\$3,310,078	\$532,170	\$7,815,541	\$7,893,988
Accounts Receivable							
Membership dues, Journal and advertising	97,030	-	-	-	-	97,030	95,405
Other Funds	-	742,699	-	-	-	742,699	994,280
Other	147,090	23,428	-	-	-	170,518	138,605
The Med Chi Agency	225,302	-	-	-	-	225,302	15,868
Loans receivable	81,875	-	-	-	-	81,875	-
Prepaid expenses	19,216	-	-	-	-	19,216	8,451
	<u>4,337,674</u>	<u>972,259</u>	<u>-</u>	<u>3,310,078</u>	<u>532,170</u>	<u>9,152,181</u>	<u>9,146,597</u>
Marketable securities							
Investment - The Med Chi Agency, Inc.	-	2,144,579	-	-	-	2,144,579	2,279,844
Investment-Management Services Corporation of Med Chi, Inc.	93,304	-	-	-	-	93,304	73,790
	11,629	-	-	-	-	11,629	6,950
<b>Fixed Assets</b>							
Land, buildings, and improvements	-	-	3,526,447	-	-	3,526,447	3,526,447
Other	59,338	-	383,940	-	53,354	496,632	439,592
	<u>\$4,501,945</u>	<u>\$3,116,838</u>	<u>\$3,910,387</u>	<u>\$3,310,078</u>	<u>\$585,524</u>	<u>\$15,424,772</u>	<u>\$15,473,220</u>
<b>LIABILITIES AND FUND BALANCES</b>							
<b>Current Accounts Payable</b>							
Trade	\$49,896	\$ -	\$ -	\$2,545,557	\$ -	\$2,595,453	\$2,691,953
Other funds	520,383	-	-	140,486	81,830	742,699	994,280
The Med Chi Agency, Inc	-	-	-	74,868	-	74,868	38,410
Component societies	711,625	-	-	-	-	711,625	886,172
Payroll taxes	9,580	-	-	-	-	9,580	7,816
Accrued expenses	91,500	-	-	-	-	91,500	80,000
Deferred income	797,955	-	-	-	-	797,955	943,573
Deferred compensation	-	259,062	-	-	-	259,062	286,355
	<u>2,180,939</u>	<u>259,062</u>	<u>-</u>	<u>2,760,911</u>	<u>81,830</u>	<u>5,282,742</u>	<u>5,928,559</u>
<b>Fund Balances</b>							
Invested in fixed assets	-	-	3,910,387	-	-	3,910,387	3,910,387
<b>Designated</b>							
Legal fund	87,425	-	-	-	-	87,425	87,425
Educational purpose	76,199	-	-	-	-	76,199	58,932
Continuing medical education	16,386	-	-	-	-	16,386	9,738
Building fund	71,202	-	-	-	-	71,202	49,885
Coggins building fund	23,583	-	-	-	-	23,583	33,546
Physician rehabilitation	174,477	-	-	-	-	174,477	72,435
Other	17,798	-	-	-	-	17,798	3,733
Restricted fund	-	-	-	-	503,694	503,694	-
Undesignated	1,853,936	2,857,776	-	549,167	-	5,260,879	5,318,580
	<u>2,321,006</u>	<u>2,857,776</u>	<u>3,910,387</u>	<u>549,167</u>	<u>503,694</u>	<u>10,142,030</u>	<u>9,544,661</u>
	<u>\$4,501,945</u>	<u>\$3,116,838</u>	<u>\$3,910,387</u>	<u>\$3,310,078</u>	<u>\$585,524</u>	<u>\$15,424,772</u>	<u>\$15,473,220</u>

■ Exhibit B

— STATEMENT OF INCOME, EXPENDITURES AND TRANSFERS —  
GENERAL FUND (UNDESIGNATED)

	For Years Ended	
	12/31/90	12/31/89
<b>Income</b>		
Dues	\$1,161,632	\$1,152,204
Rents and services	284,502	203,393
Meetings	94,603	73,893
Journal advertising and subscriptions	164,355	146,789
Interest	213,804	201,088
Miscellaneous	98,287	357,248
Equity interest in Management Services Corporation	4,679	-
Equity interest in the Med Chi Agency, Inc.	319,514	190,931
	<u>2,341,376</u>	<u>2,325,546</u>
<b>Expenditures</b>		
Operating expenses	2,743,470	2,674,179
Deficit of income over expenditures	(402,094)	(348,633)
Transfer from charitable education fund	-	69,205
Transfers from plant fund	419	(543,467)
Transfers from Med Chi insurance fund	340,000	250,000
Excess (deficit) of income over expenditures and transfers	<u>\$ (61,675)</u>	<u>\$ (572,895)</u>

The accompanying notes to financial statement are an integral part of this statement.

■ Exhibit C

— STATEMENT OF INCOME AND EXPENDITURES —  
MED CHI INSURANCE FUND

	For Years Ended	
	12/31/90	12/31/89
<b>Income</b>		
Administrative fees	\$ 49,774	\$ 50,211
Interest	347,654	285,832
	<u>397,428</u>	<u>336,043</u>
<b>Expenditures</b>		
Administrative services	40,101	34,622
Postage, printing, and supplies	60	40
Rent	960	960
Telephone	200	200
Auditing	2,000	-
	<u>43,321</u>	<u>35,822</u>
Excess of income over expenditures	354,107	300,221
Transfer to general fund	(340,000)	(250,000)
Excess of income over expenditures and transfers	<u>\$ 14,107</u>	<u>\$ 50,221</u>

The accompanying notes to financial statements are an integral part of this statement.

■ Exhibit D

— STATEMENT OF INCOME AND EXPENDITURES —  
RESTRICTED FUND FOR YEAR ENDED  
DECEMBER 31, 1990

<b>Income</b>	
Grants	\$643,500
Investments	20,412
Advertising	250
	<u>644,162</u>
<b>Expenditures</b>	
Conferences	39,935
Depreciation	11,704
Equipment maintenance	104
Evaluations and screenings	4,463
Marketing	8,176
Meetings	39
Membership and certification	230
Miscellaneous	110
Photocopying	1,004
Postage and shipping	3,097
Printing and publishing	10,282
Publications	1,245
Salaries	59,105
Benefits	18,360
Supplies	2,284
Travel	330
	<u>160,468</u>
Excess of income over expenditures	<u>503,694</u>

The accompanying notes to financial statements are an integral part of this statement.



	Additions			Deductions			
	Excess (deficit) Income Over Expenditures and Transfers	Investment Income	Interest on Savings Account	Other Income and Contributions Received	Gain or (Loss) on Sale of Securities	Transfers In (Out)	Balance December 31, 1990
<b>General Fund</b>							
Designated	\$ 315,694	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 467,070
Undesignated	1,915,611	-	-	-	-	340,419	1,853,936
Endowment and Special Funds							
Plant Fund	2,867,522	172,655	1,772	5,000	(112,121)	-	2,857,776
Med Chi Insurance Fund	3,910,774	-	32	-	-	(419)	3,910,387
Restricted Fund	535,060	-	-	-	-	(340,000)	549,167
	-	-	-	-	-	-	503,694
	<u>\$9,544,661</u>	<u>\$172,655</u>	<u>\$1,804</u>	<u>\$5,000</u>	<u>\$(112,121)</u>	<u>\$-</u>	<u>\$10,142,030</u>

For Year Ended December 31, 1989

	Additions			Deductions			
	Excess (deficit) Income Over Expenditures and Transfers	Investment Income	Interest on Savings Account	Other Income and Contributions Received	Gain or (Loss) on Sale of Securities	Transfers In (Out)	Balance December 31, 1989
<b>General Fund</b>							
Designated	\$334,803	\$ -	\$ -	\$ -	\$ -	\$ -	\$315,694
Undesignated	2,488,506	-	-	-	-	(224,262)	1,915,611
Endowment and Special Funds							
Plant Fund	2,555,896	180,745	1,672	-	213,797	-	2,867,522
Med Chi Insurance Fund	3,367,099	-	208	-	-	543,467	3,910,774
	484,839	-	-	-	-	(250,000)	535,060
	<u>\$9,231,143</u>	<u>\$180,745</u>	<u>\$1,880</u>	<u>\$-</u>	<u>\$213,797</u>	<u>\$ 69,205</u>	<u>\$9,544,661</u>

## Notes to Financial Statements December 31, 1990

### Medical and Chirurgical Faculty of Maryland

#### ■ Note 1

##### Summary of Significant Accounting Policies

The Medical and Chirurgical Faculty of Maryland is a nonprofit organization, tax exempt under Section 501 of the Internal Revenue Code.

Certain items in the December 31, 1989 financial statements have been reclassified to make them comparative with the current year.

The restricted fund represents an assessment established July 1, 1990 by the State of Maryland for the Medical and Chirurgical Faculty of Maryland to conduct a physician rehabilitation program.

Marketable securities are carried at cost. Market values at December 31, 1990 and 1989 were \$2,502,705 and \$2,771,443, respectively.

The Faculty carries its investment in the 100 percent-owned Med Chi Agency, Inc. at equity. The net assets of the Corporation as of December 31, 1990 and 1989 were as follows:

	1990	1989
Current assets	\$431,112	\$744,726
Fixed assets - net	<u>14,626</u>	<u>24,186</u>
	<u>445,738</u>	<u>768,912</u>
Current Liabilities	<u>352,434</u>	<u>695,122</u>
	<u>\$ 93,304</u>	<u>\$ 73,790</u>

The Faculty carries its investment in the 100 percent-owned Management Services Corporation of Med Chi, Inc. at equity. The net assets of the corporation as of December 31, 1990 and 1989 were \$11,629 and \$6,950, respectively.

Fixed assets of the plant fund, other than personal property, are recorded at cost. Portraits were appraised as of December 31, 1963 at \$65,000, an increase of \$51,000 over prior years. All other personal property was appraised as of December 31, 1949. Depreciation on fixed assets is not provided. A schedule of fixed assets follows:

	1990	1989
<b>Real Estate</b>		
<i>1209-1215 Cathedral Street:</i>		
Land and building	\$110,636	\$110,636
Improvements	543,035	543,035

	1990	1989
<i>1205-1207 Cathedral Street and 1204 Maryland Avenue:</i>		
Land and buildings	2,138,624	2,138,624
Improvements	188,296	188,296
<i>224 Main Street, Annapolis:</i>		
Land and buildings	<u>545,856</u>	<u>545,856</u>
	<u>3,526,447</u>	<u>3,526,447</u>
<b>Other</b>		
Library books, journals	231,370	231,370
Office and library - fixtures, antiques and museum pieces	87,570	87,570
Portraits	<u>65,000</u>	<u>65,000</u>
	<u>383,940</u>	<u>383,940</u>
	<u>\$3,910,387</u>	<u>\$3,910,387</u>

Fixed assets of the general fund are recorded at cost and depreciated using the straight-line method over their estimated useful lives for assets acquired prior to 1989, using the accelerated cost recovery system for assets acquired between 1981 and 1986 and the modified accelerated cost recovery system for those acquired after 1986.

A summary of fixed assets is as follows:

	December 31, 1990	December 31, 1989	Life in Years
Automobiles	\$15,700	\$15,700	3
Office equipment and furniture	<u>350,750</u>	<u>308,384</u>	5-10
Total cost	<u>366,450</u>	<u>324,084</u>	
Less: accumulated depreciation	<u>307,112</u>	<u>268,432</u>	
	<u>\$59,338</u>	<u>\$55,652</u>	

Fixed assets of the restricted fund are recorded at cost and depreciated using the modified accelerated cost recovery system.

	December 31, 1990	Life in Years
Office equipment	\$58,519	5
Construction in progress- office renovations	<u>6,539</u>	
Total Cost	<u>65,058</u>	
Less: accumulated depreciation	<u>11,704</u>	
	<u>\$53,354</u>	

Provision for depreciation charged to operations for the years ended December 31, 1990 and 1989 was \$50,385 and \$40,992, respectively.

Deferred income reflects dues and fees collected in November and December for the subsequent year.



■ Note 2  
Loans Receivable

	Amount	Interest	Maturity
Healthcare Credentials Verification, Inc.	<u>\$81,875</u>	10%	2/2/95

■ Note 3  
Pension Plan

The Faculty has a noncontributory pension plan covering substantially all its employees. Pension expense for the current year and prior year were \$132,745 and \$89,408, respectively, which includes amortization of prior service cost over twenty years. The Faculty's policy is to fund pension costs accrued. Actuarially determined pension costs are funded on an annual basis by the Frozen Initial Liability method with initial accrued liabilities computed under the Entry Age Normal Cost method. The most recent accumulated plan benefits and plan net assets for the Faculty is presented below:

	4/1/90
Actuarial Present Value of Accumulated Plan Benefits	
Vested	\$575,252
Nonvested	<u>45,541</u>
	<u>620,793</u>
Net assets available for benefits	<u>1,095,619</u>

The assumed rate of return used in determining the actuarial present value of accumulated plan benefits was 6.5 percent for 1990. The fund's assets as of April 1, 1990 exceeded the vested benefits by \$520,367.

■ Note 4  
Related Parties

The Medical and Chirurgical Faculty of Maryland owns the stock of the Med Chi Agency, Inc. The Faculty leases office space to the Agency under a month-to-month lease. Lease payments from the Agency were \$17,286 per year for 1990 and 1989. Additionally, the Faculty performed certain management and accounting services for the Agency; income for these services was \$105,000 per year in 1990 and 1989.

The Medical and Chirurgical Faculty of Maryland owns the stock of Management Services Corporation of Med Chi, Inc. These were no charges to the Corporation in 1990 and 1989 for management and accounting services performed by the Faculty for the Corporation.

# Succeed In The 90's With



## Computerized Medical Records

Did you know that most doctors spend about 40% of their time recording and trying to decipher patient histories from traditional Medical Charts?

Smart Chart's unique software package affords quick and easy access to medical records.

By using Smart Chart, you will have more time to...

- See patients
- Conduct research
- Enjoy yourself!

Call Smart Chart, Inc. today and see how easy it is to *Succeed in the 90's with Smart Chart!*

### MAIL OR FAX THIS COUPON TO:

Smart Chart, Inc.  
11212 Grandview Avenue, Suite 108  
Wheaton, Maryland 20902  
1-800-783-7825  
301-946-7825 (Metro. D.C.)  
Fax 301-762-2831

YES! I am interested in Smart Chart.

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Title \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Phone \_\_\_\_\_ Fax \_\_\_\_\_

## 1991 BUDGET

### ■ INCOME ■

<u>Descriptions</u>	<u>Revenue</u>	<u>% of Total Revenue</u>
Membership Dues	1,150,000	30.44
Phy. Rehab. Dues Assessment	50,000	1.32
Investments	924,000	24.46
Insurance Activities	122,000	3.23
Rental Properties	73,800	1.95
Collection Service	30,000	0.79
Dues Collection Fees	15,000	0.40
<i>Maryland Medical Journal</i>	165,990	4.39
Publications	59,895	1.59
Computer Services	15,000	0.40
Library Services	42,050	1.11
Management Services	31,500	0.83
Convention Services	110,350	2.92
Member Services	14,700	0.39
Physician Rehabilitation	677,250	17.93
Associated Services	<u>296,108</u>	7.84
<b>TOTAL REVENUE</b>	<u><b>3,777,643</b></u>	<b>100.00</b>

## 1991 BUDGET

### ■ EXPENSES ■

<u>Descriptions</u>	<u>Expenses</u>	<u>% of Total Expenses</u>
Salaries	1,646,722	43.63
Salary Incentives	25,000	0.66
Benefits	438,372	11.61
Supplies	62,250	1.65
Equipment	93,800	2.49
Equipment Maintenance	8,950	0.24
Travel	39,650	1.05
Education Courses	17,585	0.47
Memberships & Certifications	8,565	0.23
Publications	4,978	0.13
Postage & Shipping	77,525	2.05
Printing & Publishing	227,000	6.01
Photocopying	47,760	1.27
Contract Services	43,300	1.15
Meetings	19,900	0.53
Miscellaneous	2,000	0.05
Auxiliary	1,000	0.03

#### Specific Departmental Expenses:

Administration	104,900	2.78
Finance & Membership	20,000	0.53
<i>Maryland Medical Journal</i>	350	0.01
Public Relations	14,750	0.39
Publications	18,100	0.48
Human Resources	6,000	0.16
Legal/Gov't Relations	338,000	8.95
Library Services	11,700	0.31
Convention Services	96,000	2.54
Physician Rehabilitation	193,900	5.14
Building Operations	<u>206,500</u>	5.47

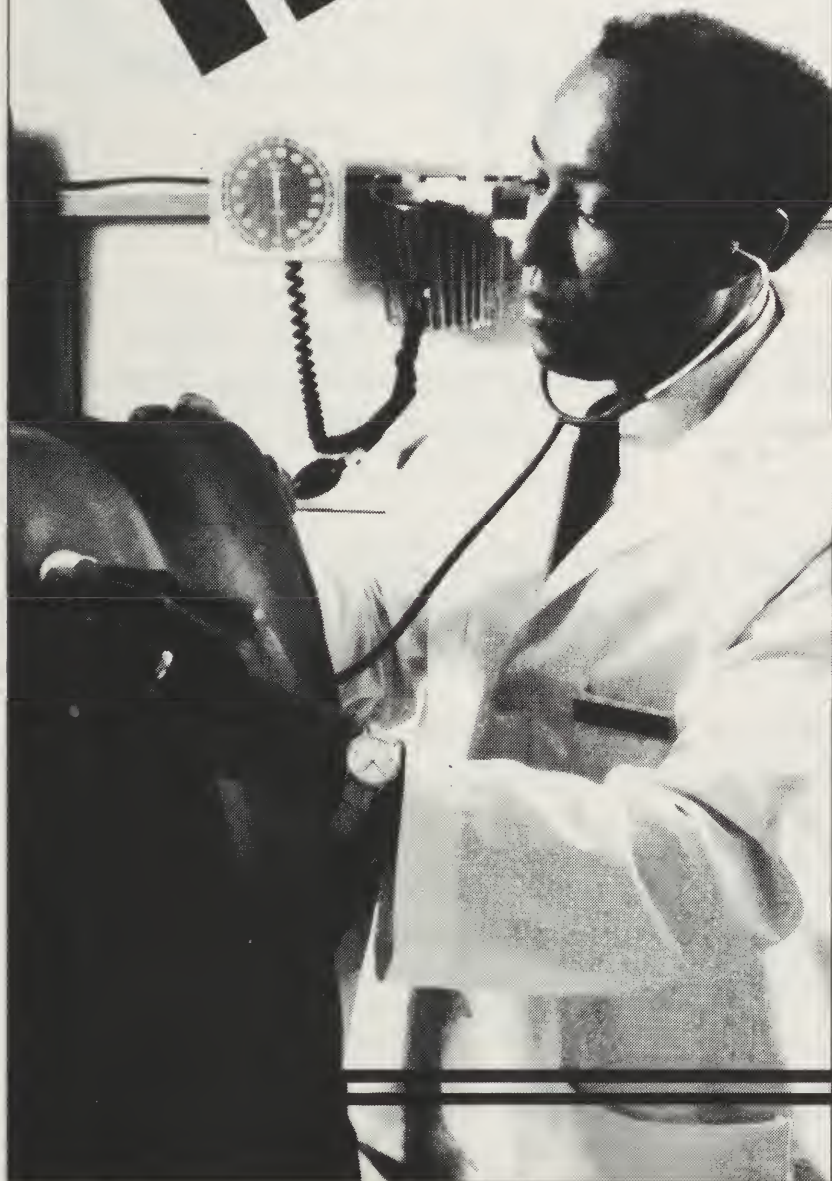
**TOTAL EXPENSES** **3,774,557** **100.00**

**EXCESS REVENUE** **3,086**

**TOTAL BUDGET** **3,777,643**



# AIM HIGH



## **SPECIALIZE IN AIR FORCE MEDICINE.**

ER Physicians. Radiologists. OB/GYNs and other specialists! Today's Air Force gives you the freedom to specialize without the financial overhead of running a private practice. Talk to an Air Force medical program manager about the tremendous benefits of becoming an Air Force medical officer:

- No office overhead
- Dedicated, professional staff
- Quality lifestyle and benefits
- 30 days vacation with pay each year

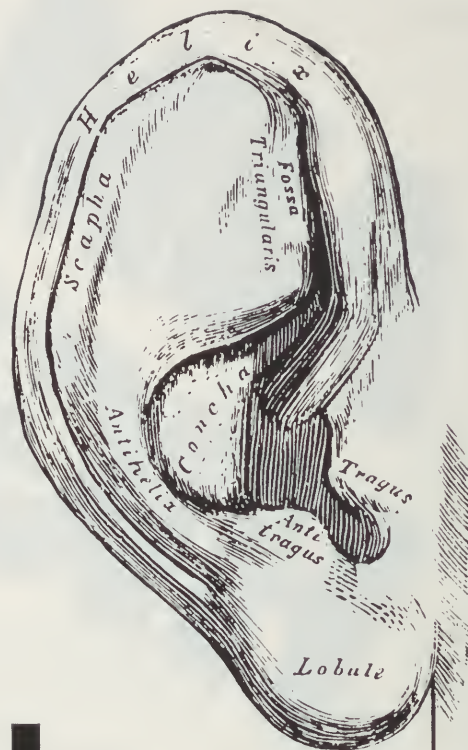
Examine your future in the Air Force. Learn if you qualify. Call

**USAF HEALTH  
PROFESSIONS**

**(301) 981-7897  
COLLECT**



# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas.... and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
m a r y l a n d

Free to Med Chi members.



### Outstanding Committee Chairpersons Selected for 1990-1991 Committee Year

Each year, Med Chi's president selects committee chairpersons who have made outstanding contributions to Med Chi to receive certificates of recognition. This year, President Reynaldo L. Lee-LLacer MD honored four physicians for their exceptional service and dedication:

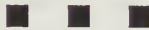
*Fred A. Gill MD*, Chairperson  
Committee on AIDS

*John G. Bartlett MD*, Vice Chairperson  
Committee on AIDS

*Sidney B. Seidman MD*, Chairperson  
Peer Review Committee

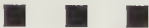
*Stanley R. Platman MD*, Chairperson  
Committee on Physician Rehabilitation

Med Chi also presented a special award to *Hiroshi Nakazawa MD* for his work as Statewide Coordinator for the Doctor/Lawyer/Teacher Partnership Against Drugs.



### Two Physicians Win 11th Annual Med Chi Photo Contest

The Public Relations Committee sponsored Med Chi's Eleventh Annual Photo Contest. Med Chi and Auxiliary members entered a total of thirty-three photographs which were judged by Evan Cohen, a freelance and commercial photographer from Baltimore. *David Paul MD* of Baltimore won first place and *Michael Liteanu MD* of Baltimore won second place in the contest. All photographs entered in the contest were on display during the Med Chi Annual Meeting at the University of Maryland Center of Adult Education in College Park.



### Award for Excellence in Organized Medicine

In 1990, Med Chi established an award to recognize contributions made by Maryland medical students to organized medicine. This year, Med Chi received nominations from The Johns Hopkins University School of Medicine and from the University of Maryland School of Medicine. The following two students were selected to receive this award:

*Elliot Cazes* is a senior at the University of Maryland School of Medicine. He has been president of his class for three of his undergraduate years at the University of Maryland. Mr. Cazes is described as being a leader who is responsive to the needs of both his classmates and the school of medicine. He has participated actively in the Curriculum Committee and other school activities. He has also represented students at meeting with the Chancellor of the University of Maryland System. After graduation, Mr. Cazes will continue to study at the University of Maryland in the Department of Obstetrics and Gynecology.

*Martin J. Citardi* is a senior at The Johns Hopkins University School of Medicine. Martin has been politically active throughout his undergraduate years at Johns Hopkins University. He has written several essays on the role of technical advances in medicine. As a student, he has actively taken part in discussions on the relationship between the role of the physician as an advocate for the patient and the physician's role in the profession's technical advances. Mr. Citardi has coined the phrase "technical humanism" to embody his philosophy of using the advances in medicine in a way allowing for the humane delivery of health care. Following graduation, Mr. Citardi plans to pursue residency training in Otolaryngology in the Department of Surgery at the Yale University School of Medicine. ■

## YOUR WILL: a powerful way to help others.



Think about it. Remembering a worthwhile charity in your will is a powerful way to assure that the principles you believe in are supported and that your hard work will help others in the future.

### CONSIDER

#### The Charitable & Educational Foundation

of the Medical and Chirurgical Faculty of Maryland

1211 Cathedral Street, Baltimore, MD 21201

301-539-0872 / 1-800-492-1056

\*Your bequest is tax deductible\*



#### SAMPLE BEQUEST PARAGRAPH

which you might wish to share with your attorney: "I give, devise and bequeath unto The Charitable & Educational Foundation (an amount, property or % of one's estate) to be held as an endowment, to be called The (Name of person commemorated and memorialized) Endowment, the income to further the endeavors of the Faculty.



"Physician of the Year," Donald T. Lewers MD, and his wife, Patricia, proudly pose with the 1991 Wyeth-Ayerst Laboratories Award for Community Service.

### Physician Award for Community Service Presented to Donald T. Lewers MD

On May 8, 1991, during the Med Chi Annual Meeting in College Park, Donald T. Lewers MD of Easton, Maryland received the Wyeth-Ayerst Laboratories Physician Award for Community Service for his efforts to preserve the wildlife and the environment of Maryland's Eastern Shore. Formerly the A.H. Robins Award, the Physician Award for Community Service is presented each year to a physician who has provided outstanding service to his or her community outside of the field of medicine.

An internist from Easton, Dr. Lewers has served as a member of the Board of Directors for the Waterfowl Festival in Easton, Maryland for nine years. He was later elected President of the Festival and served for five consecutive years. He has been a member of the Festival's Advisory Board since 1981.

Dr. Lewers' activity as a member of the Board of Directors and as President of the Chesapeake Wildlife Heritage prompted him to serve on the Board of Directors and as President of the National American Wildlife Heritage.

An avid sponsor of Ducks Unlimited, Dr. Lewers was a national trustee for that organization from 1981 to 1985. He has been a Trustee Emeritus for the past six years and, in 1988, he was elected as Honorary Chairperson of the Potomac Chapter of Ducks Unlimited.

Dr. Lewers' involvement in these organizations resulted in his appointment to the Board of Visitors to the University of Maryland Center for Environmental and Estuarine Studies where he served for six years.

Dr. Lewers' outstanding achievements for the benefit of wildlife and the environment truly embody the spirit of the Physician Award for Community Service. His dedication and commitment to the conservation and preservation of Talbot County, the State of Maryland, and to our country certainly deserve this recognition by his peers. ■

### Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of the *Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel

MMJ 1211 Cathedral Street  
Baltimore, MD 21201

#### Old Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

#### New Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_

Date: \_\_\_\_\_



**AMA President C. John Tupper MD Presents  
Special Award to Med Chi's  
Doctor/Lawyer/Teacher Partnership Against Drugs**

American Medical Association (AMA) President C. John Tupper MD presented Med Chi's Doctor/Lawyer/Teacher Partnership Against Drugs with a special award "in recognition and appreciation for the outstanding work done by its physician members in the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs Program." During the House of Delegates session at the Med Chi Annual Meeting on May 8, 1991, Dr. Tupper commended Maryland's efforts to prevent drug abuse in our nation's children and presented Med Chi President Reynaldo L. Lee-Llacer MD with the special award. Dr. Tupper also presented an award to the Maryland Bar Association for its efforts in the program.

Through the Partnership, which is based on a model established by the AMA and the American Bar Association (ABA), doctor and lawyers visit schools in their communities to talk with students about the medical and legal consequences of drug and alcohol use. Thus far, doctor and lawyer teams have visited schools in almost every county in Maryland. To date, more than 250 classes have been visited and the program has been presented to over 8,000 students. ■



Hiroshi Nakazawa MD (r), Statewide Coordinator for the Doctor/Lawyer/Teacher Partnership Against Drugs receives a special certificate of recognition from Med Chi President Reynaldo L. Lee-Llacer MD.

## ***Physician Placement Services***

**The Medical and Chirurgical Faculty of the State of Maryland** maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

***Physician Placement Service***  
***1211 Cathedral St., Baltimore, MD 21201***  
***(301-539-0872)***

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the *Physician Placement Service*. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland.

**MMJ** announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

Some of the many issues addressed by the Med Chi Council and Executive Committee are provided here.

- *AMA's Health Access America Program*
- *AMA's Position on Effective Practice Parameters*
- *Publication of AMA's Policy Compendium*
- *Med Chi's Doctor/Lawyer/Teacher Partnership Against Drugs*
- *Physicians detained by the Syrian Arab Republic*
- *Maryland's Medicaid and Open Enrollment Program*
- *Health Insurance Coverage for Med Chi Employees*
- *Board of Physician Quality Assurance Issues*
- *Med Chi's Physician Rehabilitation Program Expansion*
- *Managed Care Plan Subscriber Transfer Policies*
- *State and Federal Laboratory Regulations*
- *Medicare Physician Regulations Relief Amendments*
- *Living Will and Durable Powers of Attorney Document Dissemination*
- *Discontinuance of the Medical-Legal Hotline*
- *Continuing Medical Education (CME) Oversight and Accreditation*
- *Development of AIDS Administration Regulations -- COMAR 10.52.08*
- *Support of AMA's Policy on Euthanasia*
- *The Use of Acupuncture by Non-physicians*
- *Support of Shock Trauma Clinical Centers as Autonomous Programs*
- *No Fault Insurance*
- *Med Chi Budget*
- *Legal Defense for Physicians Involved in Quality Assurance, Utilization Review, and Peer Review Systems*
- *Establishment of State Medicaid Formulary*
- *The Howard County Medical Society HIV Discrimination Case*
- *National Health Insurance*
- *Appropriate On-site Development of Hospital Medical Staff Bylaws*
- *Support for the Uniformed Services University of Health Sciences*
- *Opposition to HCFA Delayed Medicare Reimbursements*
- *1999 Med Chi Bicentennial Planning*
- *Tobacco Resolutions and Legislation*
- *Support of New MMR Vaccine Protocol*
- *Discontinuation of Small Area Practice Variation Committee*
- *Discussion of Delmarva Foundation for Health Care, Inc. Policies and Board Composition*
- *Radiation Technologist Regulations*
- *Med Chi Spokespersons and Representation*
- *Med Chi Committee Reporting Procedures*
- *Health Insurance Company Contract and Reimbursement Issues*
- *Locations and Dates for 1991 Semiannual Meeting and 1992 Annual Meeting*
- *Revision of the Faculty's AIDS Position Paper*
- *Misleading Marketing of Insurance Plans*
- *Development of Regional HCFA Global Surgery Policy*
- *DHMH Medicaid Funding Proposal*
- *Physician/HMO Contracts*
- *Proper Referral of AIDS Patients*
- *Non-Discrimination of International Medical Students/Physicians*
- *Healthcare Credentials Verification, Inc. (HCV)*
- *Athletic Participation Examination for Adolescents*
- *Opposition to Agreements Restricting the Practice of Medicine*
- *Visit from Med Chi's Sister Medical Society in Japan*
- *Highlights of the President's Regional Conferences* ■



## MISCELLANEOUS MEETINGS

- August 14-17** **West Virginia Medical Society Annual Meeting**, at The Greenbrier, White Sulphur Springs, WV. Cat 1 AMA/PRA credits available. Fee: \$125 members; \$175 nonmembers. Info: Nancie Divvens, 304-925-0342.
- September 13-14** **Nutrition Support in the Cancer Patient**, sponsored by the Maryland Society for Parenteral Enteral Nutrition, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Cat 1 AMA/PRA credits available. Fee: \$10 members; \$20 nonmembers. Info: B. Pharoan MD, 301-661-9300.
- September 19-20** **3rd Annual Trauma Conference**, sponsored by the Peninsula General Hospital Medical Center at the Carousel Hotel and Resort, Ocean City, MD. 12 Cat 1 AMA/PRA credits. Info: Darlene Kwiatkowski, 301-543-7328.
- September 21** **Current Controversies in Prostate Carcinoma**, sponsored by the Greater Baltimore Medical Center's Department of Radiation Oncology at GBMC, Towson, MD. Info: 301-828-2549.
- October 4-5** **Medical Consultation and Management in the Perioperative Period**, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Lorraine Zaganas, 301-328-6598.
- October 21-22** **The Fifth Annual National Disability Management Conference**, sponsored by the Washington Business Group on Health (WBGH), at the Crystal Gateway Marriott in Arlington, VA. Fee: \$375 WBGH members; \$450 nonmembers. Info: Heather Patterson, 202-408-9320.
- October 24-26** **Eighteenth Anniversary: New Techniques and Concepts in Cardiology**, sponsored by the American College of Cardiology, at the Hyatt Regency Hotel, Washington DC. Info: Registration Secretary, 301-897-2695.

---

**Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.**

- |                     |  |
|---------------------|--|
| <b>August 1</b>     | <b>Overview of the Norplant System</b>                   |
| <b>August 15</b>    | <b>HCFA Substandard Care Regulations</b>                 |
| <b>August 22</b>    | <b>Kidney and Pancreas Transplantation</b>               |
| <b>August 29</b>    | <b>AIDS Panel Discussion</b>                             |
| <b>September 5</b>  | <b>Acute Pain Management</b>                             |
| <b>September 12</b> | <b>Osteoporosis: Update for the 90s</b>                  |
| <b>September 19</b> | <b>New Assisted Reproductive Technologies</b>            |
| <b>September 26</b> | <b>Investigation of Child Abuse (A Panel Discussion)</b> |
| <b>October 3</b>    | <b>Update on Therapeutic Advances in Hepatitis C</b>     |
| <b>October 10</b>   | <b>Functional Endoscopic Sinus Surgery</b>               |
| <b>October 24</b>   | <b>Frozen Section Diagnosis</b>                          |
| <b>October 31</b>   | <b>Anxiety</b>   |

---

**American College of Emergency Physicians, 1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.**

- |                     |  |
|---------------------|--|
| <b>September 5</b>  | <b>Board of Directors Meeting</b>                  |
| <b>September 21</b> | <b>Oral Board Preparation and Private Tutorial</b> |
| <b>October 17</b>   | <b>Executive Committee</b>                         |

**THE JOHNS  
HOPKINS  
MEDICAL  
INSTITUTIONS**

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Avenue, Baltimore, Maryland 21205 (301-955-5880).

<b>September 12-13</b>	<b>Pediatrics for the Practitioner - Update 1991.</b> 14.5 Cat 1 AMA/PRA credits. Fee: \$250 physicians; \$160 residents, retired physicians, and allied health professionals. Info: 301-955-2959.
<b>October 4-5</b>	<b>Asthma, Allergy and Immunology</b> , at the Sheraton Towson Conference Hotel, Baltimore, MD. MNA credit is pending. Fee: \$125 one day; \$225 two days. Info: 301-955-2959.
<b>October 7-9</b>	<b>Toxicology Update '91: Concepts and Advances in Immunotoxicology.</b> Info: Dr. Jacqueline Corn or Catherine Walsh, 301-955-2609.
<b>October 14-19</b>	<b>33rd Annual Emil Novak Memorial Course on Gynecology, Gynecological Pathology, Endocrinology, and High Risk Obstetrics.</b> Cat 1 AMA/PRA credits and ACOG cognates available. Fee: \$650 physicians; \$450 residents, fellows, and allied health professionals. Info: 955-2959.
<b>October 24-30</b>	<b>Fifth Annual Postgraduate Course -- Core Content of Emergency Medicine: A Comprehensive Review</b> , at the Marriott Hotel, Baltimore-Washington International Airport, Baltimore, MD. Cat 1 AMA/PRA credits and ACOG cognates available. Fee: Before 9/15/91, \$950 physicians; \$850 residents; After 9/15/91, \$1,050 physicians; \$950 residents. Info: 301-955-2959.
<b>November 2-3</b>	<b>Hemodynamic Monitoring, Patient Care and Pulmonary Artery Catheterization - A Hands-on Course.</b> 14 Cat 1 AMA/PRA credits. Fee: \$550. Info: 301-955-2959.
<b>November 15</b>	<b>Management of Diabetic Retinopathy: Application of Guidelines from 1991 ETDRS Publications.</b> 8 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents, fellows, and allied health professionals. Info: 301-955-2959.
<b>Continuously Throughout the Year</b>	<p><b>Visiting Preceptorship in Pediatric Critical Care Medicine.</b> Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. Info: 301-955-2959.</p> <p><b>Ophthalmic Electrophysiology Technician Training Course.</b> Ongoing 1-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. Info: C. Kearney 301-955-2959.</p> <p><b>Ophthalmology Grand Rounds.</b> Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. Thursdays, 7:30-9:00 am. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700.</p> <p><b>Neuro-ophthalmology Conference.</b> Held twice per month. Info: 301-955-5700.</p> <p><b>Cornea Conference.</b> Held monthly. Info: 301-955-5700.</p> <p><b>The Department of Radiology and Radiological Sciences</b> offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.</p>



**THE JOHNS HOPKINS  
MEDICAL  
INSTITUTION (cont.)  
Continuously  
Throughout the Year**

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.



## PHYSICIAN'S RECOGNITION AWARD

During May 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Ayd, Frank J.  
Barish, Robert Alan  
Barnes, Paul David  
Benkert, Marianne  
Brodell, Robert David  
Burns, James Theodore  
Chen, Hong-Yu  
Cordes, Robert Alan  
Dabela, Abraham Bake  
Davis, Frank W.  
Dhanda, Anand Mohan  
Diaz, Maria Del Carmen  
Ellin, Morton Jack  
Engel, Rainer Maria Ernst  
Eyring, John Frank  
Farias, Oscar A.

Flax, Herman J.  
Furth, Mary Louise Stang  
Gonzalez, Ramon Leopoldo  
Graf, Martin William  
Griffin, Hope Ulene  
Gschwend, John Arthur  
Haggerty, Donald R.  
Kaiser, Paula Reines  
Khalil, Fauzi  
Lantos, George Joseph  
Logue, Andrew Douglas  
Mascardo, Rolando  
Moul, Judd Wendell  
Nading, John Henry  
Nasrallah, David V.  
Order, Stanley Elias

Rodriguez, Maria E.  
Rogers, Clinton Lloyd  
Rothstein, Robert Joseph  
Sarachene, Joseph Eugene  
Schwartz, Frederic Tovi  
Seneff, Michael Geren  
Shah, Navin Chimanlal  
Sirio, Carl Alexander  
Smith, Hermon Walter  
Stoline, Anne Marie  
Travaline, John Michael  
Viener, Robert Stephen  
Windom, Hugh Harmon  
Winnacott, Charles H.  
Yang, Vincent Wenshan

## UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

**September 6**

**Current Concepts in Ophthalmology: 11th Annual Clinical Conference**, at the Columbia Inn, Columbia, MD. 6 Cat 1 AMA/PRA credits. Fee: \$75.

**October 4-5**

**Medical Consultation and Management in the Perioperative Period**, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Lorraine Zaganas, 301-328-6598.

**October 4-6**

**Seventh Annual Maryland Contact Lens Symposium**, at the Turf Valley Hotel and Country Club, Ellicott City, MD. 12 Cat 1 AMA/PRA credits. Fee: \$165.

**November 8**

**Controversies in Pharmacology and the Elderly**, at the Omni International Hotel, Baltimore, MD. Credits and fee to be determined.

**Continuously  
Throughout the Year**

**Visiting Professor Program** - A directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.

### Information for Authors

Manuscripts may be sent to Editor, MMJ, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

#### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in Word Perfect or ASCII.

Include the full name of author(s) with highest degrees, academic and professional titles, affiliations, and any institutional or other credits.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major

contributions and fewer in shorter articles. Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Four or fewer illustrations should be adequate for a manuscript of 4 or 5 pages. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the **Uniform Requirements for Manuscripts Submitted to Biomedical Journals** compiled by the International Committee on Medical Journal Editors (available through the **Annals of Internal Medicine**).

**Permissions:** When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

**Copyright:** Material published in MMJ is protected by copyright and may not be reproduced without the written permission of both the principal author and MMJ.

\* \* \*

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.



**RADIOLOGIST**

Immediate opening for board certified diagnostic radiologist. Must be competent in all aspects including MRI, Angio, some interventional. Generous salary and vacation package - Full partnership 2 years. Group practice serving 380-bed hospital and private office. Send CV to: Christopher T. Conyers MD or Robert J. Corcoran MD, Medical Center X-ray, Suite 10, Pine Bluff Rd, Salisbury, MD 21801.

**FAMILY PRACTICE**

Two female family practice physicians desire a third to join them in active and growing Pasadena, MD practice. Must be Board Certified. Call 255-2700 for further information. Ask for Carla Var-num.

**OPHTHALMOLOGIST**

Wanted for Ellicott City office. Equipment provided, flexible terms. Reply to Box 9.

**PEDIATRICIANS**

BC/BE with neonatal skills to provide ongoing coverage, nights and weekends, in a regional, tertiary level NICU. Responsibilities include supervision of pediatric residents and hands-on care. Send inquiries to Howard J. Birenbaum MD, St. Agnes Hospital, 900 Caton Ave, Baltimore, MD 21229 or call 301-368-2504.

**GENERAL INTERNIST**

South. PG County. To join two established internists. BC/BE required. Exciting opportunity. Interest in Geriatrics desirable. Send CV to: Frank M. Ryan MD, 6188 Oxon Hill Rd. #601, Oxon Hill, MD 20745.

**FP/INT PARTNERSHIP**

Opportunity for family practitioner or internist to become partner in growing Family Practice in the N. Bethesda/Rockville area. Send CV to Box 8.

**SURGICAL HOUSE OFFICER**

Positions available for part-time surgical house officers. Board certified with at least 2 years experience preferred. Send CV to Jules Cahan MD, Holy Cross Hospital of Silver Spring, 1500 Forest Glen Rd, Silver Spring, MD 20910.

**PART-TIME EMERGENCY MEDICINE**

Baltimore/Washington Area. Part-time positions available in highly desirable, moderate volume Emergency Department (28,500 patients in 1990) at Howard County General Hospital. Hospital is located in an attractive community situated between Baltimore and Washington DC in Columbia, MD. Applicants should be board certified/prepared in emergency medicine or related specialty. Send CV to Paul Emergency Physicians Group, Sam Shoemaker Bldg, Ste 201, 11065 Little Patuxent Parkway, Columbia, MD 21044. 301-997-1414 or 301-467-3886.

**PHYSICIANS WANTED**

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

**INTERNAL MEDICINE PGY-II**

Fully staffed, major community teaching hospital program in metropolitan Baltimore seeks additional upper-level supervising resident for expanding training program. Reply to Box 7.

**PEDIATRICIAN**

Pediatric Group, Baltimore suburb, desires pediatrician for employment, leading to full partnership. Send resume to Box 9, 9121 Reistertown Road, Owings Mills, MD 21117.

**FAMILY PHYSICIAN**

Wanted part time for Perry Hall office. 529-6440.

**PRIMARY CARE**

**PRIMARY CARE SPECIALISTS**  
MD, PA, a private medical group in Ellicott City, MD has an immediate opening for a BC/BE Family Practitioner, Internist or Allergist to join our practice. Our practice consists of 4 Family Practitioners and 5 Internists. We offer a competitive salary and benefits package with bonus and partnership potential. Call is split on a rotating basis. We emphasize comprehensive care in a private practice setting, with hospitalization at our local county hospital - Howard County General. Patients are both fee for service and members of private capitated plans. Contact B. Harvey Minchew MD; Primary Care Specialists MD, PA; Dorsey Hall Medical Center; 9501 Old Annapolis Rd, Suite 200; Ellicott City, MD 21043. 301-997-7000.

**ENT NEEDED**

+800-900 sq ft space available for rent, busy medical bldg. Rockville, MD, w/ref. phys. No ENT in bldg. Call 301-230-0300

**INTERNIST**

BC/BE Internist wanted to join 2-person group in Baltimore/Washington corridor location. Early Partnership. Begin July 1992. Send CV to Box 11.

**MEDICAL PRACTICE FOR SALE**

Established medical practice for sale. Suitable for 1 or 2 physicians. Opportunity for Family Physician or Internist. Will introduce to patients and medical community if needed. Please contact: Joseph Taler MD, 95 Aquahart Rd, Glen Burnie, MD 21061.

**GYNECOLOGY PRACTICE**

Excellent solo GYN practice for sale in North Baltimore. Fee for service. Good OB potential. Respond Box 10.

**FOR SALE:**

**FAMILY PRACTICE**

Internal Medicine. Established 25 years. In the Dundalk area. Please call 363-6424 after 7:00 pm.

**DESIRABLE MEDICAL SUITE  
AVAILABLE FOR LEASE, ANNE  
ARUNDEL COUNTY**

2,100 sq ft located at a busy intersection of Rt 175 in established Community Shopping Center. Currently serving over 18,000 families in the immediate vicinity of Severn and Odenton with dynamic growth also taking place here; space is equipped with x-ray room, lab rooms, examining rooms, etc. and is ready for immediate occupancy. For information contact: DONALD H. READY REAL ESTATE (301) 821-1935.

**MEDICAL OFFICE SPACE FOR  
LEASE - WALDORF, MD**

Office with consultation and treatment rooms available, as well as private office if needed. Lab and x-ray on site. Billing, receptionist and medical assistance available. Located on a major highway, close to one of the largest housing developments in Maryland and the fastest growing community in the So. Maryland area. Space located in a beautiful new building with ample parking space. Open 9 am to 9 pm. Most specialties needed in the area. Two hospitals located within eight miles. Contact Faye Smith, Administrator, Waldorf, MD 301-843-3888 or 301-645-8550.

**MEDICAL OFFICE SUITE  
FOR LEASE**

Suite for one or two physicians adjacent to St. Agnes Hospital. Pine Heights Medical Center, 1001 Pine Heights Ave., Baltimore, MD 21229. For information call 644-0929.

**OFFICE SPACE TO SHARE**

Deluxe 2100 sq ft in Perry Hall. 529-6440.

**SUBLET**

Office to sublet in New Medical Office Building at St. Joseph Hospital. Call 321-1514.

**MEDICAL OFFICE FOR SALE  
OR LEASE**

2000 sq ft in excellent location near Cross Keys in medical office building. Very convenient to most major hospitals. Contact Rick Tucker at 727-8347.

**MEDICAL OFFICE SUITE  
FOR LEASE**

Osler Medical Center, Towson; near St. Joseph Hospital, GBMC, and Sheppard Pratt Hospital. Info: R.R. Kent MD, 301-323-5831 or 301-461-9922.

**OFFICE SPACE TO SUBLEASE**

Exam room and consultation room in new medical office in Columbia. Full or part-time. 301-290-KIDS(5437).

**OFFICE/RESIDENCE**

For lease - Baltimore County. Fantastic location close to area hospitals. Off street parking. 1500+ square feet of offices and reception area. PLUS 1500 sq ft of luxury living at its best. Kayhouse Realty 882-7000. EHO.

**MEDICAL OFFICE**

Suitable for 1 or 2 physicians; St. Mary's County, a rapidly growing semirural area. Contact Leon Berube for details; 997 Old Route Five, Mechanicsville, MD 20659 (301-884-3113.)

**MMJ**

**Classified Advertising**

*Med Chi Members:*

*\$5 per line per insertion*

*Physician Nonmembers:*

*\$8 per line, minimum \$50 per ad*

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment. Ad cancellations must be received in writing seven weeks prior to the first of the month.

Send ad replies or new ad copy to: MMJ, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. In-

**MEDICAL OFFICE**

**EQUIPMENT - MUST SELL**

Exam tables, cyro, ultrasound, colposcope, lamps, phones, book case, and more. CALL 301-798-5564 or 301-618-2244.

**PROFESSIONAL RESUMÉ  
SERVICES**

Successfully serving physicians since 1976. All specialties. Effective! Confidential. We provide curriculum vitae preparation, cover letter development and career planning. Immediate service available. Call 1-800-933-7598 (24 hrs). Alan Kirschen, M.A. ■

**Hotline Numbers for  
Impaired Professionals**

Physicians -- 727-0120

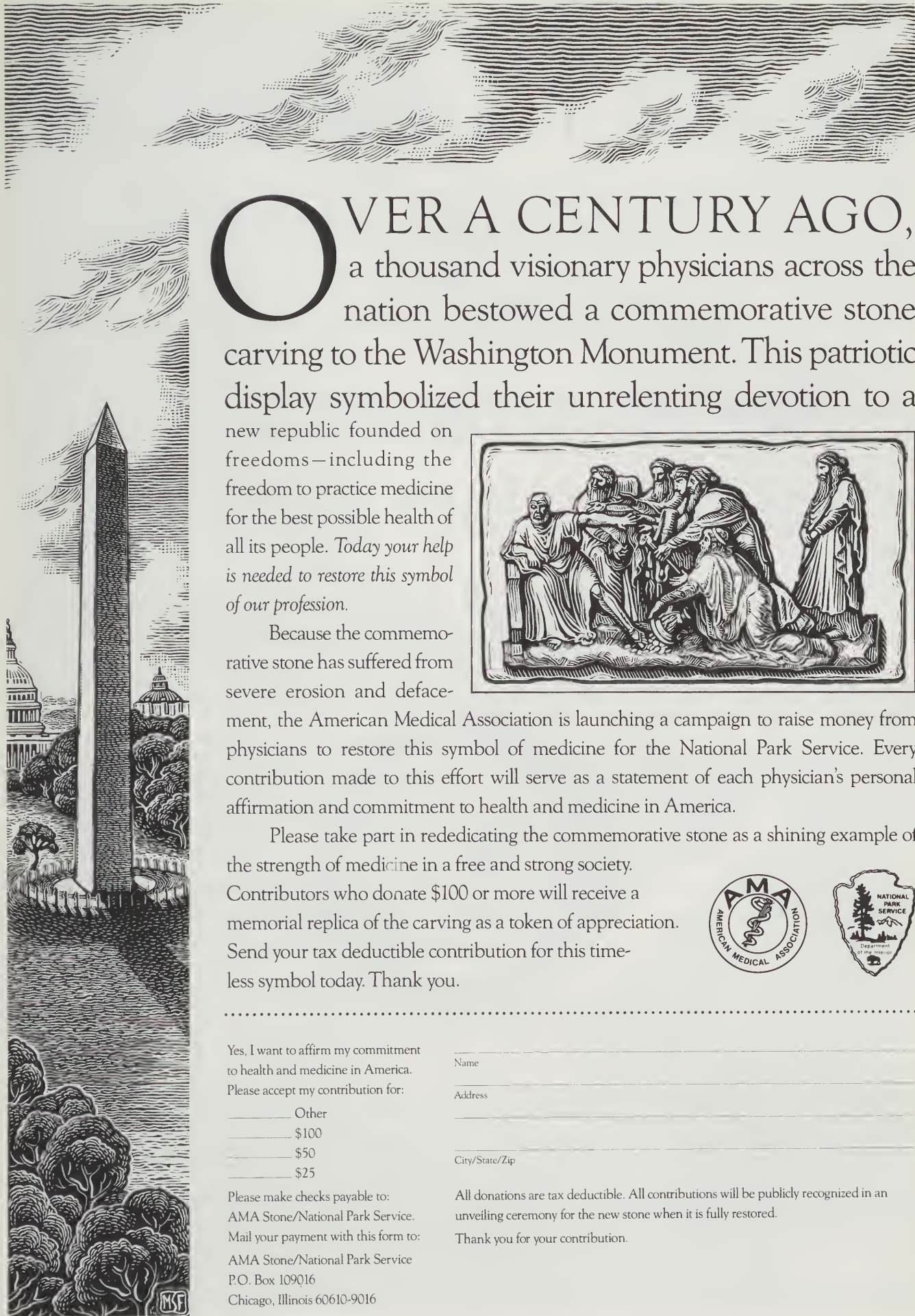
Dentists -- 964-2275

Attorneys -- 685-7878

Pharmacists -- 727-0746

Emergency Psychiatric Beds  
800-492-0610





OVER A CENTURY AGO, a thousand visionary physicians across the nation bestowed a commemorative stone carving to the Washington Monument. This patriotic display symbolized their unrelenting devotion to a new republic founded on freedoms—including the freedom to practice medicine for the best possible health of all its people. *Today your help is needed to restore this symbol of our profession.*

Because the commemorative stone has suffered from severe erosion and defacement,

the American Medical Association is launching a campaign to raise money from physicians to restore this symbol of medicine for the National Park Service. Every contribution made to this effort will serve as a statement of each physician's personal affirmation and commitment to health and medicine in America.

Please take part in rededicating the commemorative stone as a shining example of the strength of medicine in a free and strong society. Contributors who donate \$100 or more will receive a memorial replica of the carving as a token of appreciation. Send your tax deductible contribution for this timeless symbol today. Thank you.



Yes, I want to affirm my commitment to health and medicine in America.

Please accept my contribution for:

☐ Other  
☐ \$100  
☐ \$50  
☐ \$25

Please make checks payable to:  
AMA Stone/National Park Service.  
Mail your payment with this form to:  
AMA Stone/National Park Service  
P.O. Box 109016  
Chicago, Illinois 60610-9016

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

All donations are tax deductible. All contributions will be publicly recognized in an unveiling ceremony for the new stone when it is fully restored.

Thank you for your contribution.

# **Join us in a new kind of partnership ... uniting doctors, lawyers, teachers, parents, and youth against drug and alcohol abuse.**

Become part of the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the



war against drugs. Become part of a unique initiative in Maryland to bring doctor/lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations Department  
at 301-539-0872, 1-800-492-1056.**

Doctor/Lawyer/Teacher Partnership Against Drugs





Don't Smoke Yourself To Death.

# A MEDICAL TEST SHOULD NOT SCARE PEOPLE HALF TO DEATH!



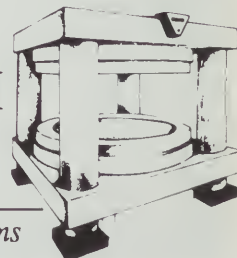
Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS™ MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

At the Accessible MRI of Baltimore County, Inc., we make it easier for you to diagnose your patients' problems.



ACCESSIBLE MRI of  
BALTIMORE COUNTY, INC.

110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



# Quality Is Not Optional. Establishing Hospital Priorities.

*Patients in American hospitals are closely monitored. Nurses check vital signs even when a patient feels and looks fine. The reason: to verify objectively that diagnosis, treatment and follow-up have been done properly—that the patient is as healthy as he or she appears.*

*Just as carefully and just as regularly, hospitals monitor themselves. Through rigorous quality assurance programs,*

*a hospital keeps a finger on its own pulse, evaluating every aspect of its own performance. The reason: to deliver the best possible service and clinical care to every one of its patients.*

*In this article, we look at how hospitals implement these quality assurance programs and how you, the patient, benefit from them.*

## JCAHO accreditation—setting a tough standard.

Quality is not optional in America's hospitals. For institutions whose mission is preserving life and caring for the sick, there can be no margin for error. Absolute quality is absolutely essential.

Which is why hospitals have long maintained quality assurance programs setting the highest standards of service and clinical care. And why they subject themselves every three years to accreditation by the Joint Commission on Accreditation of Healthcare Organizations: JCAHO.

Independent, not-for-profit, JCAHO was established over 60 years ago by hospitals and physicians. Its mission: to verify a hospital's quality assurance process through rigorous review and evaluation of its actual performance.

A JCAHO accreditation team of a physician, an administrator and a nurse (all seasoned veterans) visits a hospital for an extensive three day inspection. They measure the hospital's actual performance against hundreds of individual standards and protocols in the 300 page JCAHO manual. Team members not only observe current practice; they review a sample of patient records for the entire three year period under scrutiny.

JCAHO accreditation is not a rubber stamp. While commendations may be given in areas of excellence, even the most prestigious institutions receive—and welcome—recommendations for change. Because the goal of both JCAHO and the hospital itself is quality patient care.

## Quality assurance—excellence every day.

While JCAHO accreditation takes place once every three years, hospitals are involved in quality assurance *every day*.

The process begins with setting standards or protocols for patient care—diagnostic techniques, treatment procedures, patient follow-up, etc. These standards reflect the wisdom and experience of the hospital's medical and professional staff, as well as current medical literature, research and JCAHO guidelines.

To ensure that patient care, in fact, reflects these standards, an effective quality assurance process mandates ongoing case review. At GBMC, for example, trained, full-time quality assurance nurses reviewed over 19,000 individual patient records during

1989. They checked each chart for more than 23 separate generic, as well as numerous specialty area, standards. Any exceptions to the generic screening process are noted and reviewed by the appropriate department's quality assurance committee.

This close review process verifies the strengths of a hospital's procedures and identifies any need for change. Along with continual monitoring of medical and technological developments, such review is the basis for ongoing updates of standards and procedures.

For patients, this never-ending cycle of quality assurance provides reassurance—an extra measure of confidence in excellent patient care.

## Quality patient care—our number one priority.

Quality assurance grows out of a hospital's philosophy that objective evaluation is essential to the hospital, its physicians and its patients. For example, the beginning of GBMC's Value Statement reads: "We will provide our patients and their families with quality health care services with sensitivity to their physical, educational and emotional needs. We recognize the trust and confidence placed in us by our patients and we act with integrity and honesty in all situations to preserve that trust and confidence." We believe that as a patient you have a "right" to receive high quality care.

Our process is thorough, meticulous and builds in objective verification of our own findings. We monitor our own performance as effectively as our nurses

monitor patients' vital signs. And our patients are the beneficiaries.

Quality is *not* optional for a hospital. As the next article in this series will explain, quality assurance also plays an important role in a hospital's selection and evaluation of its medical staff.

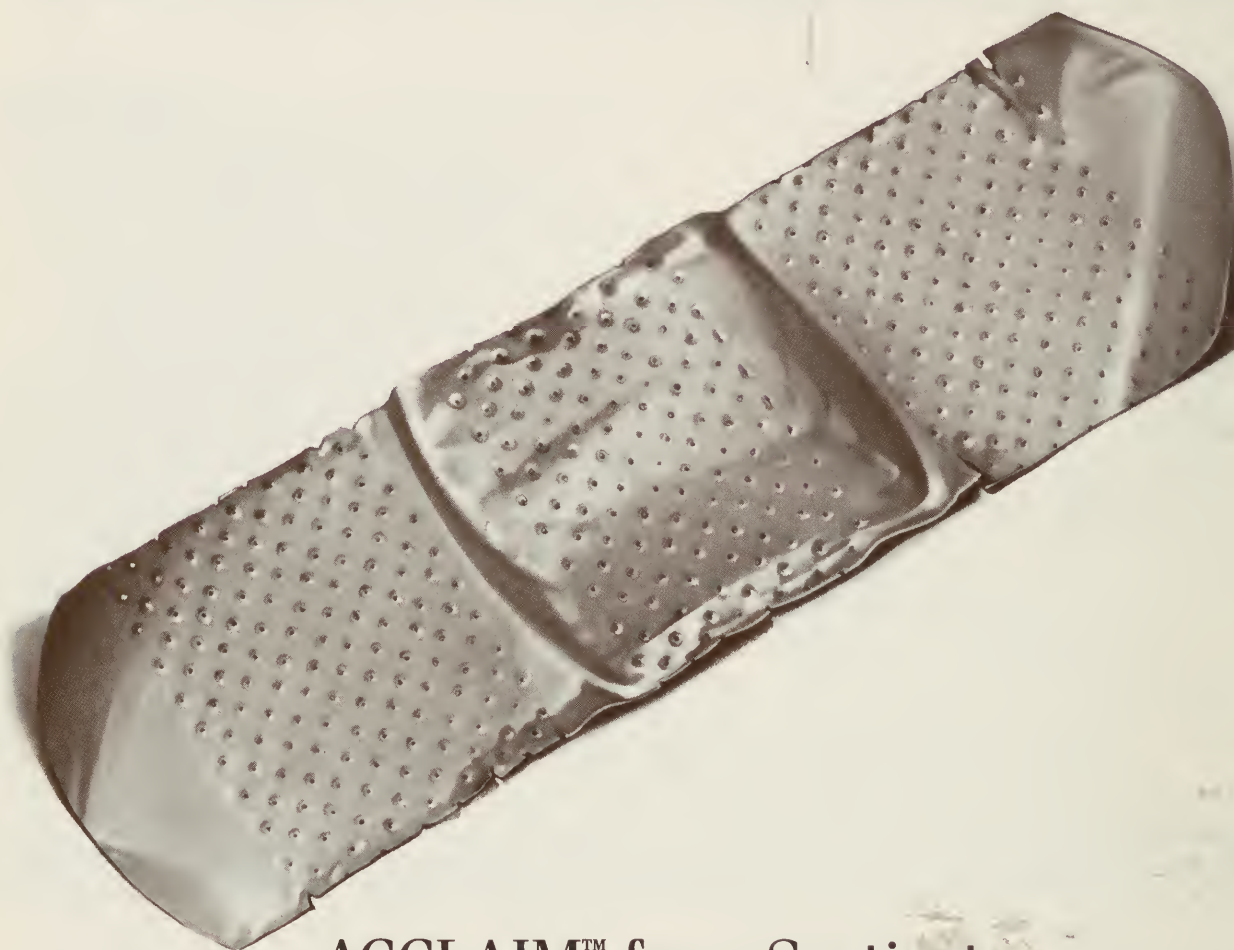
Establishing priorities. For a hospital, the number one priority is quality patient care.



For a reprint of this, or any other article in this series, please call 828-GBMC (4262) or write: Community Relations, 6701 North Charles Street, Baltimore, Maryland 21204.

© Greater Baltimore Medical Center, 1990.

# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*

80076  
179



ST PAUL  
NO. 9  
1991  
ISSN: 0003-4124  
MARYLAND MEDICAL JOURNAL

# MMJ

## Maryland Medical Journal

SEPTEMBER 1991



NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA MD 20894

NATIONAL  
LIBRARY

AUG 29 1991

OF  
MEDICINE

"Woman Spinning" by Michael Liteanu, M.D.  
Second Place, Med Chi's 1991 Photo Contest

Endorsed by Med Chi  
for Maryland Physicians

©1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.

# 4,831 Of You Have Attended Our Risk Management Seminars.

## There's Always Room For One More.

Informed consent, ICD-9-CM coding, medical record documentation, physician-patient communication, AIDS and medical practice, emerging medical technologies, financial planning, legal aspects of medical practice, insurance options, office staff procedures, health care politics in the 90's, to mention a few.

We offer an ongoing schedule of timely, relevant, and concise Risk Management programs for you and your office staff, each specifically designed around the extra skills you need in today's practice of medicine. Developed by our member physicians, the programs feature expert speakers, convenient locations, and CME credits. Some even include premium discounts.

Our seminar evaluations tell us that we're doing things right, and our attendance figures speak for themselves. We'll look forward to seeing you at an upcoming program.

There's always room for one more!



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# Central Laboratories

Established 1970

*Partners for Quality Healthcare*

## **First in Quality:**

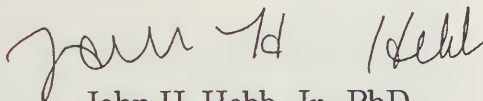
Central Laboratories is dedicated to providing outstanding service. Clients, our ultimate focus, motivate us to provide unmatched quality, reliability, consistency, and value. Our unique commitment is reflected in the exceptional level of technical proficiency, client support, and service we provide to all our customers. Quality assurance begins the minute the specimen is collected and continues throughout testing and reporting.

## **Continuous in Service:**

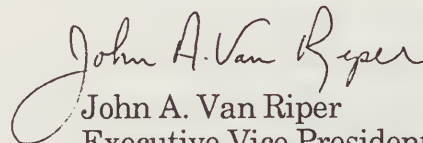
Our dedication to outstanding service compels us to provide for your individual needs. In doing so, we have expanded our operations to include **full service laboratory testing for Washington, D.C. and Suburban Maryland through our conveniently located Montgomery County Laboratory.** When it comes to **personalized laboratory testing services**, no one performs like Central Laboratories.

## **Continuous in Value:**

Our commitment to the highest quality laboratory services attainable is founded in our long tradition of service to the community. *Our innovative and progressive convictions differentiate us from our competitors and can provide for your laboratory needs today...and tomorrow.*



John H. Hebb, Jr., PhD.  
President



John A. Van Riper  
Executive Vice President

Phone our marketing department for information and a tour.

Baltimore Headquarters  
1920 Greenspring Drive  
Timonium, MD 21093  
(301) 252-6710  
(800) 331-2558

D.C. and Suburban MD  
15225 Shady Grove Road  
Rockville, MD 20850  
(301) 948-4527

# MetPath



*"Your Partner in Practice"*

## Quality

- Quality assurance program directed by our full time QA manager and our technical director.
- Control samples of up to 10% of our work load.
- Outside proficiency program results, available to you by request.

## Service

- Courteous client service, 24 hours a day.
- Flexible specimen pick-up schedules.
- Customized profiles and preprinted requisitions.
- Specialized report formats.

## Convenience

- Comprehensive testing.
- 4 STAT labs.
- 27 Patient Service Centers.
- House call service in the Baltimore/Washington area.

**Regional Headquarters**  
1550 East Gude Drive  
Rockville, MD 20850  
(301)340-9800  
(800)722-7393

**Baltimore**  
1246 East Joppa Road  
Baltimore, MD 21204  
(301)583-1500  
(800)426-1676

Lab tours are welcome! Call Sales for an appointment.

a **CORNING** Clinical Laboratory



# MMJ

## Maryland Medical Journal

SEPTEMBER 1991

VOLUME 40 NO 9

### ARTICLES

#### **Study of the Relationship Between Elevated Maternal Serum Alpha-fetoprotein and Adverse Pregnancy Outcome . . . . . 779**

*Amy P. Roop BA, Joann A. Boughman PhD and Miriam G. Blitzer PhD*

In a study of 1,703 pregnancies, adverse clinical outcomes associated with unexplained elevated maternal serum alpha-fetoprotein (MSAFP) included intrauterine growth retardation (IUGR), prematurity, IUGR and prematurity, prematurity without IUGR, spontaneous abortion, and stillbirth. These findings have significant implications for careful obstetrical management of patients with elevated MSAFP.

#### **Inflammatory Pseudotumor of the Retroperitoneum . . . . . 787**

*Santa J. Johnston MD, Bonnie L. Beaver MD, Chin-Chih J. Sun MD, Ruth E. Luddy MD and Allen D. Schwartz MD*

A child presenting with the findings of inflammatory disease was found to have pseudotumor of the retroperitoneum. Following surgical removal, all signs of the systemic inflammatory process resolved. These rare, benign tumors of unknown etiology must not only be differentiated from locally invasive malignant lesions, but may present with findings suggesting a chronic inflammatory disorder.

#### **Preventive Therapy for Tuberculosis in Maryland . . . . . 793**

*Evelyn Rabindran BA, Diane L. Matuszak MD, MPH, Ebenezer Israel MD, MPH, Helga Woodall CRNP, MA, Harriet Highsmith RN, BSN and James Flynn MD, MPH*

Maryland data substantiate the safety of isoniazid therapy in preventing tuberculosis. To eradicate tuberculosis in the U.S., private physicians must play an active role by offering preventive therapy to patients at high risk of developing the disease.

#### **Metastatic Basal Cell Carcinoma . . . . . 799**

*G. Thomas Grace MD and E. George Elias MD, MPH*

Metastatic basal cell carcinomas of the skin are rare tumors. Early excision of the primary lesion remains the best method of treatment, although unresectable tumors can be controlled by radiation therapy. Patients with regional lymph node metastases can be managed by radical lymph node dissection, while those with systemic metastases can be palliated by a combination of chemotherapy, radiation therapy, and surgery.

#### **Mortality Due to Septicemia in the Elderly: Factors Accounting for a Rapid Rise . . 803**

*Than Winn MBBS, MPH, Matthew Tayback ScD and Ebenezer Israel MD, MPH*

States with a high percentage of blacks, a high physician density, and a high rate of hospitalization among elderly persons are more likely to have higher rates of septicemia.



Maryland Medical Journal

1211 Cathedral Street  
Baltimore, MD 21201  
301 539-0872

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Elmer Hoffman MD

Carmine M. Valente PhD (Advisory)

### Art Director

Virginia Carter

### Graphic Artist

Valentia McVey

Communications Assistant

Lori Robinson

### Executive Director

Angelo J. Troisi FACHE

Communications Director

Michelle Burke MHSA

Copyright © 1991. MMJ Vol 40, No 9.  
The *Maryland Medical Journal*  
USPS 332080. ISSN 0025-4363 is published monthly by the Medical and Chirurgical Faculty of Maryland and is a membership benefit. Subscription rates: U.S. and U.S. possessions, one year: nonmembers \$35; foreign \$42. Single copy: members \$5; nonmembers \$7. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: send address changes to *Maryland Medical Journal*, 1211 Cathedral St., Baltimore, MD 21201-5585. FAX 301-547-0915.

### Advertisers

Contact: Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

## DEPARTMENTS

<b>Epidemiology and Disease Control Program</b> . . . . .	759
<i>Selected Communicable Diseases in Maryland in 1990</i>	
<b>Executive Director's Newsletter</b> . . . . .	767
<b>Clinical Observations</b> . . . . .	810
<i>Hyperemesis Gravidarum . . .</i>	
<b>Commentary</b> . . . . .	811
<i>Adjuvant Therapy for Colon and Rectal Cancer. . .</i>	
<b>A Clinical Moment With . . Diabetes</b> . . . . .	815
<i>Self-management of Diabetes . . .</i>	
<b>Board of Physician Quality Assurance Actions</b> . . . . .	819
<b>Library Page</b> . . . . .	825
<i>How Richard Gundry Came to Maryland . . .</i>	
<b>Component Society News</b> . . . . .	826
<i>Homewood Hospital Medical Staff Funds Scholarship. . .</i>	
<b>Maryland Oncology Newsletter</b> . . . . .	827
<i>Liver Resections . . .</i>	
<b>Auxiliary</b> . . . . .	829
<i>Vivian Reed Lynn: State Auxiliary President . . .</i>	

## MISCELLANY

<b>Word Rounds</b> . . . . .	764
<i>The Quaker and the Jew . . .</i>	
<b>Editorial</b> . . . . .	773
<i>Drug Reps . . .</i>	
<b>Letters to the Editor</b> . . . . .	774
<i>RBRVS and Provider Fee Project . . .</i>	
<b>Semiannual Meeting</b> . . . . .	816
<b>Book Review</b> . . . . .	832
<i>Infection Control in Preschool . . .</i>	
<b>Medical Miscellany</b> . . . . .	833
<i>Addiction Conference . . .</i>	
<b>Information for Authors</b> . . . . .	833
<b>Doctors Note</b> . . . . .	834
<b>Physician's Recognition Award</b> . . . . .	835
<b>Classified Ads</b> . . . . .	840

*Cover Photo: "Woman Spinning," by Michael Liteanu MD, won second place in the 1991 Med Chi Photo Contest. Dr. Liteanu, a retired anesthesiologist, took the photograph on the island of Mykonos, Greece. Watch for the first place photograph, "War's End," by David Paul MD on the cover of the special legislative edition of the January 1992 MMJ.  
Cover design by Virginia Carter.*





## Which Box Would You Rather Deposit Your Insurance Reimbursements In?

If you process your claims through the mail, it takes an average of two months before your reimbursements make it to the bank.

And that can really put you in a box in terms of cash flow.

But not if you join the more than 1800 physicians who are now using HCS electronic claims systems. On the average, they receive payments in days, instead of months. Reason enough to consider using our custom designed systems.

What's more, our systems are labor savers. Stacks of claims that used to take weeks to process by mail can be sent through our claims

network in a matter of hours. Saving you enormously in administrative time. Not to mention postage.

And since HCS has the backing of a billion dollar health care organization, you can depend on us for long term support, service, and solutions as your office needs change.

Call Toll-Free 1-800-543-6711 for more information. Because in rain, snow, sleet or hail, we can deliver insurance reimbursements faster.



**Health Communication Services, Inc.**

*You'll Be Overwhelmed By Your  
Cash Flow, Not Your Overhead.*







He views the world with cool detachment. Yet behind a set of drums he burns with an intensity that belies his sense of reserve. Because for Richard Leach, it's the music that makes life worth living.

A year ago, Richard was diagnosed with AIDS. And playing the drums was something he thought he would have to give up. Until his physician, Dr. Robert Z. Friedman, introduced him to Caremark Homecare.

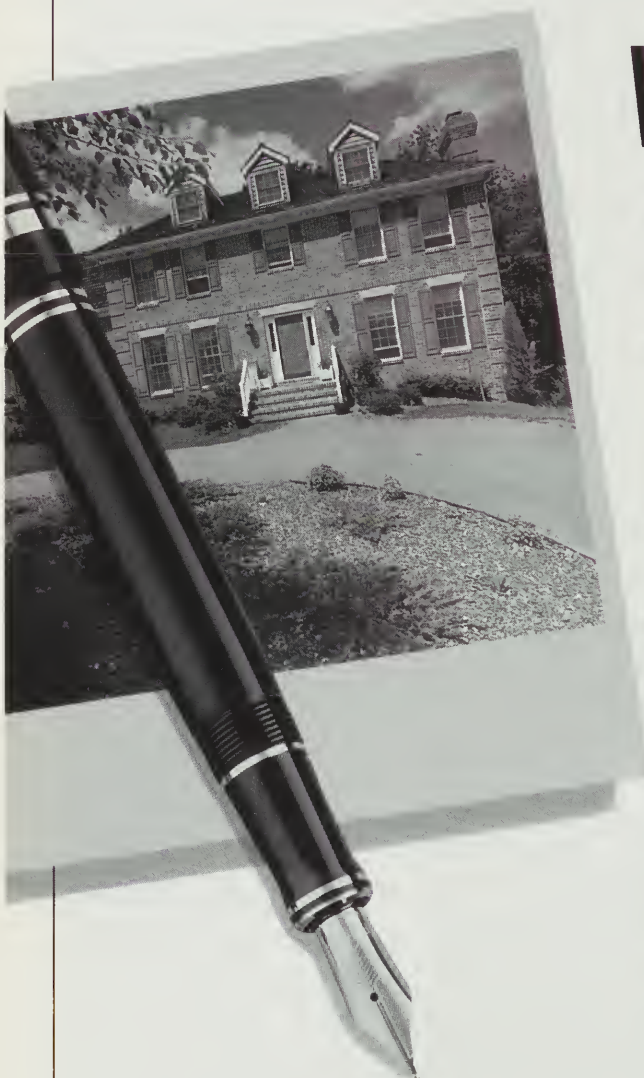
For the past six months, Caremark has provided the antibiotics that Richard infuses every other day through a catheter implanted in his chest. Therapy that helps him fight the ravaging infections often accompanying AIDS. And lets him enjoy those things he loves most.

Like the soaring harmonies of the Moody Blues. Mose Allison's cool jazz. Or being up on stage laying down a rock-steady back beat. To Richard Leach, it's all music in the key of life.

Caremark Homecare. Because life should be worth living.<sup>SM</sup>

**CAREMARK**  
Affiliate Baxter Healthcare Corporation

# JUMBO MORTGAGE CLIENTS PREFER CHASE.



**WHY?** Because Chase Professional Banking offers the flexibility, financing options, and service designed to meet the needs of the busy executive or professional.

- ☒ **Large loan amounts.** Loans for purchase or refinance from \$250,000 to \$1,000,000 or more help you maximize your buying power.
- ☒ **Competitive rates and low closing costs.** Chase does not require tax or insurance escrows, or private mortgage insurance. This can substantially reduce your initial expenses. Zero-point quotes are available.
- ☒ **Fast response.** Chase professional bankers guarantee a timely response to your loan request.
- ☒ **Exceptional service.** All mortgages remain in our portfolio, ensuring superior service over the life of the loan.

Chase Professional Banking also offers:

- A variety of high-yield deposit products.
- Unsecured lines of credit up to \$50,000.
- Luxury auto loans with terms up to 7 years.
- Marine loans up to \$250,000.

Chase Professional Banking is the choice for executives and professionals. Our resources and services are at your disposal--at your convenience.



Chase Bank of Maryland is a subsidiary of the  
Chase Manhattan Corporation.  
Member FDIC

## 301-347-0905







# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

September, 1991

## SELECTED COMMUNICABLE DISEASES IN MARYLAND IN 1990

### Concluded

#### MEASLES (204)

4.3/100,000 (U.S. 10.5/100,000)

The trend of measles from 1980 through 1990 is shown in Figure 10. In 1991 measles increased by 67 percent from 1989 (122 cases). Nine jurisdictions reported cases (Table 1; see July, 1991 issue). Onset of illness of 95.6% of the patients occurred in January through June; the peak month was May (59 cases).

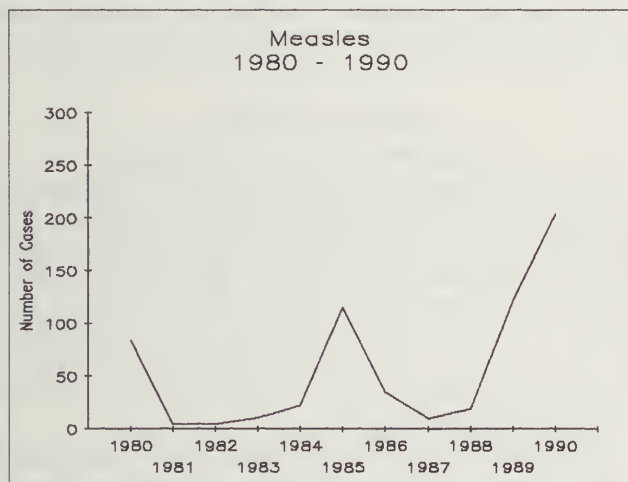


Figure 10

Baltimore City (95 cases) had the highest (12.8) incidence rate per 100,000 population in the State, followed by Prince George's (4.8), Baltimore (4.2) and Anne Arundel (4.0) counties. Fifteen (7.4%) cases were imported from other states or from abroad.

The male to female ratio was 0.7:1.0 (1.9:1.0 among 0 to 19 years olds, and 0.4:1.0 in cases 20 years of age and older. The ratio of whites to blacks was 1.2:1.0; 5 patients were Hispanic, 2 Asian, and the race of 63 was unspecified.

The age distribution of cases by vaccine status is shown in Figure 11. The distribution by age groups was as follows: 97 (48.0%) were preschool cases, 0 to 4 years of age, 39 (19.1%) were school age children, 5 to 19, and 68 (33.3%) were adults 20 years old and over. The highest age-specific incidence rate per 100,000 (28.8) was observed among 0 to 4 years olds (30.3 in females, and

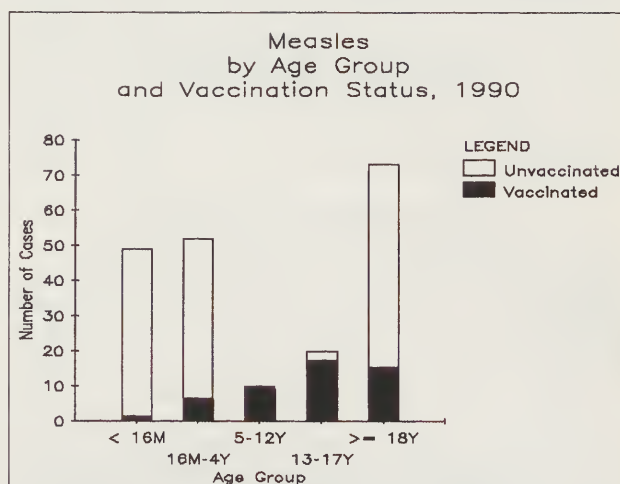


Figure 11

27.4 in males), followed by the rate in 20 to 29 (9.7) and 15 to 19 year old females (6.5). Only 6 (11.5%) of the 52 cases, between 16 months and 4 years old, were previously vaccinated (Figure 12). These preschoolers could have been protected by age-appropriate vaccination. School age children predominately had had one dose of measles vaccine and were, thus, vaccine failures. Those cases 18 and over were largely unimmunized or had unknown vaccine histories. Fifty-nine (29.4%) cases needed hospitalization (28.7% of the preschool age children, 20.0% of the school aged, and 35.3% of the adults). Of the 68 adult cases, 33 (48.5%) were health care providers.

#### MENINGITIS, VIRAL (ASEPTIC) (266)

5.6/100,000 (U.S. 4.4/100,000)

Almost three quarters (71.1%) of all cases in 1990 were reported from 4 jurisdictions: Baltimore City and County, and Montgomery and Prince George's counties. The number of cases by county is shown in Table 1 (see July, 1991 issue). The majority (78.2%) of the patients had onset of illness in June through November, the peak month was in August (52 cases).

The male to female ratio was 1.1:1.0; the sex of 2 cases was not specified. The ratio of whites to blacks was 2.6:1.0; 6 patients were Hispanic, 3 Asian, and the

race of 18 was not specified. Seventy-seven (30.0%) of the cases were less than 6 months of age, including 27 newborns. In children, 0 to 4 years of age, the incidence rate was 28.5 per 100,000 followed by the rate (7.3) in 15 to 19 years old. The highest rate in adults (6.3) was in the age group 20 to 29 years. The etiology was reported for only 7 cases: 6 enterovirus (including 1 coxsackie and 1 echovirus), and 1 H. simplex.

## MENINGOCOCCAL DISEASE (45)

**1.0/100,000 (U.S. 0.9/100,000)**

The 10 year trend of meningococcal disease is shown in Figure 12. In 1990 incidence decreased by 42.3%. Fourteen jurisdictions reported cases; Baltimore City (11 cases) and Prince George's County (9) accounted for 44.4% of all morbidity. The number of cases by county is shown in Table 1 (see July, 1991 issue). No seasonal pattern was observed; onsets of illness were distributed evenly throughout the year.

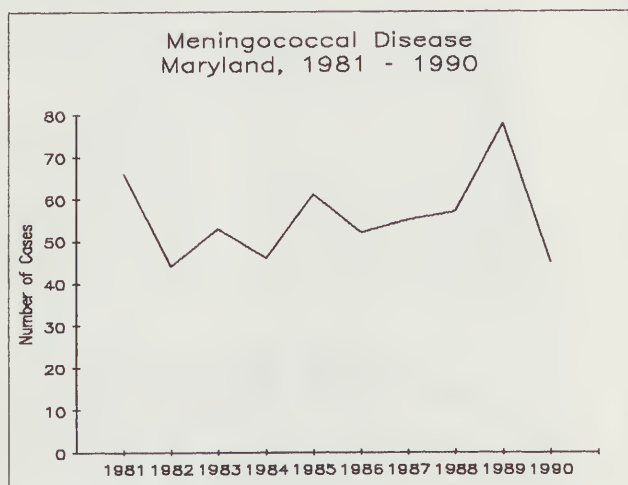


Figure 12

The male to female ratio was 1.0:1.0. The white to black ratio was 2.7:1.0; the race of 4 patients was unknown. The age ranged between 1 week and 87 years (median 3 years); 42.2% were less than 2 years of age, including 2 newborns, 40.0% were 2 to 19, and 8 (17.8%) were adults. The highest rate (6.8/100,000) was observed in 0 to 4 years olds, followed by the rate in 15 to 19 years of age (2.5/100,000).

Thirty (68.2%) patients presented with meningitis, 12 (27.3%) with meningococcemia, and 2 (4.5%) with pharyngitis; one infection was not specified. The serogroup of the N. meningitidis was reported for 13 cases, as follows: B (6), C (3) and Y (3). The outcome was known for 41 patients: 7 died, for a case fatality of 17.1 percent.

## MUMPS (1136)

**23.8/100,000 (U.S. 2.0/100,000)**

For a third consecutive year mumps continued to rise over the 6 year average of 41 cases per year between 1981 and 1987 (Figure 13). In 1990 the increase from 1989 was 81.8%. An ongoing outbreak which started among school-aged children in 1988, predominately in Prince George's County, spread in 1989 to Anne Arundel, Carroll and St. Mary's counties, and to Baltimore

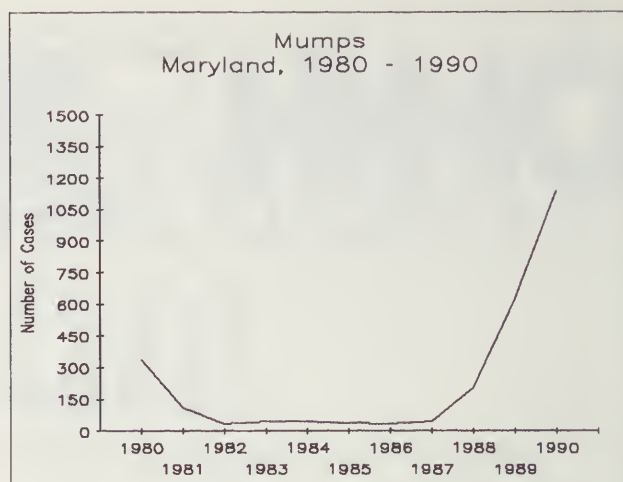


Figure 13

City the following year. In 1990 Baltimore City (536 cases, for a rate of 72.8/100,000) and Prince George's County (281 cases for a rate of 38.5/100,000) reported 72.0% of all mumps in the State. Table 1 (see July, 1991 issue) shows the number of cases by county. Almost three quarters of the cases occurred during the first part of the year (peak months March, April and May). The male to female ratio was 1.2:1.0; 58.6% were black, 27.5% - white, 1.8% - other race/ethnic group, and for 12.0% race was unknown. The highest incidence rates per 100,000 population were observed among individuals 10 to 14 (130.4) and 15 to 19 (105.8) years old.

## PERTUSSIS (90)

**1.9/100,000 (U.S. 1.7/100,000)**

The 10 year trend of pertussis is shown in Figure 14. In 1990 pertussis declined by 6.3% from 1989. The reported cases were sporadic or confined to close contacts; no outbreaks were reported. The number of cases by county is shown in Table 1 (see July, 1991 issue). The highest rates per 100,000 population were observed in Dorchester (33.1) and Talbot (16.4) counties. Almost half (46.7%) of all patients had onset of cough in July, August and September.

The male to female ratio was 0.7:1.0. Ages ranged from 20 days to 67 years (median 14 months); 56.6%

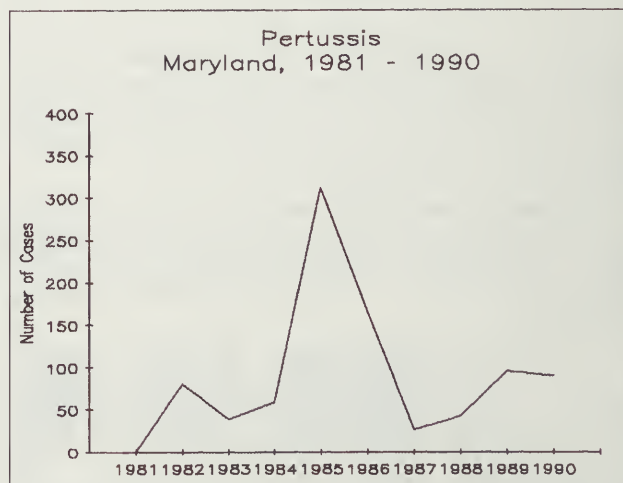


Figure 14



were less than 2 years of age. The highest incidence (29 cases) occurred among infants, 1 to 5 months of age.

Thirty-one (34.4%) of the cases were laboratory confirmed: 11 (35.5%) by DFA, 9 (29.0%) by culture, and 11 (35.5%) by both DFA and culture.

The following symptoms were reported: paroxysmal cough in 78 (86.7%), post-tussive vomiting in 55 (61.1%), whoop in 42 (46.7%), cyanosis in 35 (38.9%), and apnea in 29 (32.2%). No deaths were reported.

### ANIMAL RABIES (468)

The number of animal rabies represents only the number of laboratory positive animals out of the total submitted for testing. It is likely that 3 to 9 times more wild animals die of rabies without being detected. In 1990, in Maryland, 5459 animals were examined and 468 (8.6%) were found to have rabies.

The Mid-Atlantic raccoon rabies epizootic started in 1977. The first cases in Maryland were reported by Allegany County in 1981 and by 1990 all counties, except Talbot, Dorchester, Somerset, Wicomico and Worcester, were involved in the epizootic. The cases from 1981 through 1990 are shown in Figure 15. In 1990 rabies increased by 20.8% from 1989. The cases by jurisdiction are presented in Table 1 (see July, 1991 issue). Caroline and Queen Anne's counties experienced their first cases;

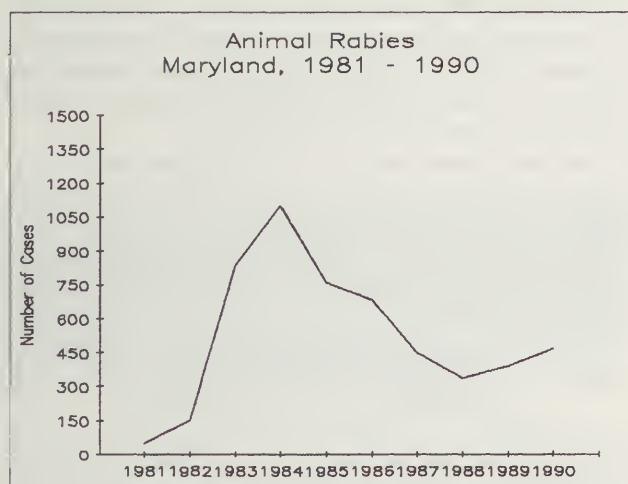


Figure 15

Calvert, Charles, Garrett, Harford and Prince George's counties recorded increase of cases; St Mary's County showed no change, and the remaining counties had fewer cases from 1989. The decrease ranged from 19% (Anne Arundel County) to 66% (Baltimore City).

The epizootic has been maintained by raccoons, which accounted for 81.6% (382 cases) of all animal rabies. In addition, 35 skunks, 17 foxes, 11 cats, 3 groundhogs, 2 bovine, 2 equine, 1 dog, and 1 otter were confirmed rabid.

Rabies in bats has a distinct epidemiological cycle and is rarely transmitted to four-footed animals. The 14 rabid bats in 1990 represented a decrease from an average of 27 cases per year in the past decade.

The last two human cases of rabies in Maryland occurred in 1976 and 1945.

## ROCKY MOUNTAIN SPOTTED FEVER (20)

0.4/100,000 (U.S.0.3/100,000)

Rocky Mountain spotted fever occurred in 11 counties and Baltimore City (Table 1, see July, 1991 issue). The highest incidence (5 cases) was observed in Prince George's County. Cases were reported from April through November; peak months, each with 4 cases, were May, June and July. The male to female ratio was 1.5:1.0; the white to black ratio was 16:1 (the race of 3 patients was not known). Ages ranged from 8 to 60 years (median 29 years). Fifteen patients had rash, including 9 with rash on the palms and/or the soles, 14-fever  $\geq 100.5^{\circ}\text{F}$ , 14 - headache, and 11 - myalgia; only 5 cases presented with all of the above symptoms and signs. Nine patients were hospitalized. No deaths were reported.

Seventeen (85.0%) of the cases were confirmed: 12 with IFA tests (4-fold rise of titers or with single 1:64 titer), 4 with FA of patient's tissue and 1 with CF; 3 cases were not confirmed - the patients refused testing or were lost for follow-up. During the 14 days before onset of illness, 12 patients had had tick bite(s), 4 had visited infested areas, 1 had been in a wooded area, 1 was an owner of a dog, and 2 had no known exposure.

## SALMONELLOSIS (1251)

26.2/100,000 (U.S. Not Available)

The trend of salmonellosis in the past 15 years is presented in Figure 16. The incidence in 1990 continued to decline for a third consecutive year since 1987 (1810 cases). Cases occurred in every county (Table 1; see July, 1991 issue). Fourteen jurisdictions reported 22 outbreaks, involving 483 individuals, 155 (32.1%) of whom were laboratory confirmed and included in the total State number. Almost one quarter of all cases (22.4%) were residents of Baltimore City. The highest rates per 100,000 occurred in Talbot (72.0), Wicomico (69.9) and Caroline (59.0) counties. Thirty-eight percent (37.5%) of the patients had onset of illness in July, August or September. The male to female ratio was 0.9:1.0. The ratio of whites to blacks, among the 869 (69.5%) individuals with known race, was 1.9:1.0; 44 (3.5%) were Asian, Hispanic, or of other race. The highest incidence rate per 100,000 population (123.7) was observed among children 0 through 4 years of age.

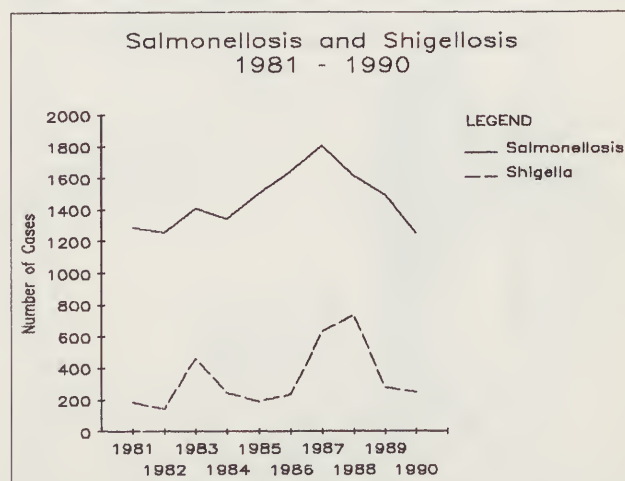


Figure 16

Of the 665 salmonella for which serotypes were available 247 (37.1%) were *S. enteritidis*, 151 (22.7%) - *S. typhimurium*, 45 (6.8%) - *S. heidelberg*, 40 (6.0%) - *S. hadar*, 22 (3.3%) - *S. brandenburg*, 17 (2.6%) - *S. braenderup*, and 143 (21.5%) were 32 different other serotypes. Sixteen of the 22 outbreaks in 1990 were caused by *S. enteritidis*.

## SHIGELLOSIS (249)

**5.2/100,000 (U.S. Not Available)**

The number of shigellosis cases reported from 1976 through 1990 is presented in Figure 16. The number of cases by county in 1990 is shown in Table 1 (see July, 1991 issue). The highest incidence rates per 100,000 population were observed in Frederick County (15.3), Baltimore City (9.0) and Prince George's County (8.5). Sixty-nine percent of the cases occurred during the second part of the year (peak month was July with 43 cases); 4 of the 5 shigellosis outbreaks, involving 77 persons, were also reported during the same period of time.

The male to female ratio was 1.0:1.0. The white to black ratio for the cases with known race (157) was 1.3:1.0. Children less than 5 years of age accounted for 30.6% of the cases and had the highest incidence rate per 100,000 population (22.6), (19.8 in male and 25.5 in female).

The most prevalent serogroup was *S. sonnei* (81.2%), followed by *S. flexneri* (16.8%), *S. boydii* (1%) and *S. dysenteriae* (1%). All 5 reported outbreaks were caused by *S. sonnei*.

## SYPHILIS, PRIMARY AND SECONDARY (1136)

**23.8/100,00 (U.S. 19.1/100,000)**

Primary and secondary syphilis increased by 42.2% from 1989. The number of cases by county is shown in Table 1 (see July, 1991 issue). Prince George's County (638 cases, for a rate of 92.0/100,000) accounted for 56.2% of all cases (Figure 17). The highest rate in the State (109.1/100,000) occurred in Dorchester County.

The male to female ratio was 1.3 to 1.0. Eighty-five percent of all males and 87% of the females were black. The most affected age group was 25 to 29 years (24% of the male and 25% of the female cases were in this age

group), followed by males, 30 to 34 years old, and females, 20 to 24 years old.

Of 150 pregnant women with syphilis, 81 delivered babies with congenital syphilis (compared to 29 in 1989), 10 of which were stillborn. Seventy-two percent of the cases occurred in Prince George's County (58 cases).

## TUBERCULOSIS (384)

**8.0/100,000 (U.S. 9.2/100,000)**

Tuberculosis declined slightly from 1989. However, 11 counties experienced an increased incidence. The number of cases by county is shown in Table 1 (see July, 1991 issue). Wicomico County (13 cases), Baltimore City (122), and Dorchester County (5) had rates per 100,000 population (17.5, 16.6, and 16.5, respectively), double that of the State as a whole.

The ratio of whites to non-whites was 0.5:1.0. Seventeen percent (65) of the cases were less than 15 years of age.

In Montgomery County, 56 (67%) of the cases were foreign-born, primarily from Southeast Asia and Central America. In Prince George's county, 79% of the cases were non-whites and 16% were refugees. Large transient populations of migrant farm workers with high prevalence of positive skin tests in Dorchester, Somerset and Wicomico counties, might have contributed to the increased incidence.

A match of the tuberculosis and AIDS registries for 1990 identified 41 (10.7%) people with both diseases, an increase from the 26 (6.4%) in 1989. Between 1978, and 1990, 83 such cases have been identified.

A seroprevalance survey of 178 patients with tuberculosis from the counties (excluding Baltimore City), found 4 (2.2%) to be HIV positive.

Drug resistant strains of TB and increasing resistance to multiple drugs during treatment have also affected control of tuberculosis.

## TYPHOID FEVER (33)

**0.7/100,000 (U.S. 0.2/100,000)**

An outbreak of typhoid fever in Montgomery County in August 1990, accounted for the 183.3% increase in typhoid fever from 1989. Of 60 people attending a picnic, 24 became ill after eating potato salad prepared by an asymptomatic recent (3 month) emigre from Central America. *S. typhi* was isolated from the foodhandler's stool. Vi antibodies by both RIA and ELISA were high. Sixteen of the 24 patients were culture positive for *S. typhi*. Seven cases were hospitalized; 20 were treated with antibiotics. All recovered.

With the exception of one case with occupational exposure in a laboratory, the rest of the cases in Maryland (9), were all imported.

## ERRATUM

In Table 4, *Lyme Disease by County*, in the August 1991 issue, the cases and the rate per 100,000 in Calvert County should read 7 and 13.6 respectively (rather than 71 and 3.6.)

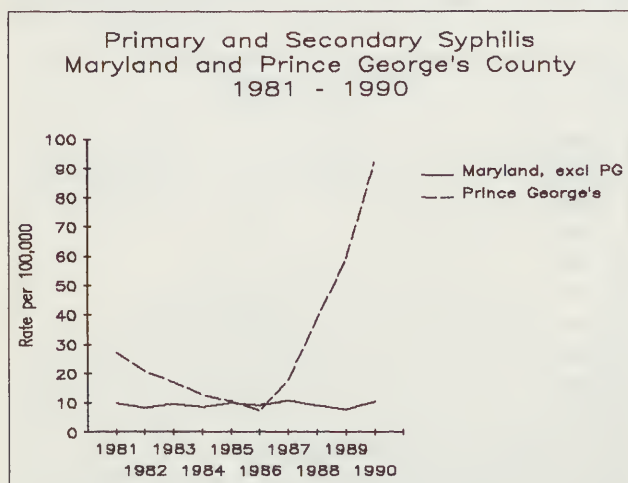


Figure 17





*More than service...*

## **The Baltimore Rh Typing Laboratory**

*Specialized Services to the Medical Community since 1945*

### **APPLIED GENETICS DIVISION**

★ Parentage Testing ★

Kinship Analysis and Identity Testing • Forensic Analysis

Clinical Blood Testing

Red Cell Phenotyping • Rh Antibody Screening • DNA Polymorphism Typing  
HLA Phenotyping, Matching & Disease Association

### **THERAPEUTIC APHERESIS DIVISION**

Consultation and Referral Service • Therapeutic Plasma Exchange

Cytopheresis, Lymphoplasmapheresis, Lymphopheresis

Prosorba® Column Plasma Exchange

### **SEROLOGIC TESTING DIVISION**

★ HIV -Confidential Testing and Counseling ★

Infectious Disease Testing

Hepatitis, CMV, Legionella and Mycoplasma

Hyperimmune and Allergic Plasma Donor Center

### **The Baltimore Rh Typing Laboratory**

400 West Franklin Street • Baltimore, MD 21201

(301) 225-9595

*... A Commitment To Excellence*

## **You Manage The Office Let Us Do The Rest!**

Low Cost Initial Investment  
Daily Management Reports  
Accounts Receivable Report  
Service Analysis Report  
Aging Reports  
BC & BS of MD Forms  
MediCare Forms  
Medical Assistance Forms  
Electronic Submission

Claims Resubmission  
HCFA 1500 Forms  
Third Party Billings  
On-Line Trans. History  
Creating Patient Statements  
Statement Mailing Services  
On-Going Support  
In-House Training  
Complete Documentation

To Put The Computer Center, Inc.  
Mainframe Computer To Work  
For You, Just Call:

**(301) 728-3883**

# **If There is Alzheimer's Disease...**

**Church Home** has been caring for men and women with Alzheimer's Disease since 1987 in a small and very special place we call the Broadway Wing.

The Wing is physically separate from Church Home but, like the Home, directly connected to Church Hospital. It is restful and secure. There are 22 private rooms and an enclosed garden. Nowhere in the Baltimore area is there a nursing staff better prepared—by training, experience, and temperament—for their profession.

One monthly charge covers virtually everything. There will be no hospital bills, no doctors' bills, no bills for medicines. And there is no entrance fee.

For more information or to arrange a visit to the Broadway Wing, call 732-1410.



## **Church Home**

The Broadway Wing  
101 N. Bond Street • Baltimore MD

*A subsidiary of Church Home & Hospital, founded in 1857*

## The Quaker and the Jew

Bart Gershen MD

The year was 1798. Napoleon Bonaparte, a Frenchman, was designing a treacherous coup d'état, while Edward Jenner, an Englishman, was about to publish an "Inquiry into the Causes and Effects of the Variolae Vaccinae." King George III sat despotically on his British throne while his former colonists in democratic America were about to pass the Alien and Sedition Acts.

On August 17th of that year, in the village of Pentonville, eight miles north of London, a child was born to a devout Quaker family; they named him Thomas. The parents, John and Elizabeth, had despaired of ever having children for their first two sons had died in infancy. But, this child was strong and active and full of enthusiasm.

Their home was filled with love and contentment. This despite the constant, oppressive prejudice that frequents people with peculiar dress or speech patterns. Thomas certainly experienced social ostracism because of his orthodox Quaker manner, but that prejudice merely served to strengthen the antithesis -- his belief in the equality of all people.

When he was twenty, Thomas wrote "An Essay on the Promotion of Civilization" in which he said "my life's aim will be to protect the primitive aboriginal people of all continents of the world to which European traders are moving." He pledged himself to ameliorate their condition, to support their cultures, and to provide them with the skills of Western civilization. He abhorred slavery and wrote with compassion about the plight of the American Indian who he believed would soon become extinct.

He helped found the British Aborigine Society dedicated to those humanitarian ends and he grew to manhood nurtured by these beliefs, confident in his own ability to right the wrongs of an arrogant, insensitive society.

Thomas was quite short and rather self-conscious, but his beliefs were sustained and passionately supported by Sarah Godlee, his attractive second cousin. The two soon fell in love, and Thomas asked for her hand -- but the elders of the church refused to permit the marriage.

The couple was devastated. There was a touching farewell, and a melancholy Thomas left Pentonville to begin a new life as physician-in-training at St. Thomas and Guy's Hospital in London.

There he walked the wards, at a tuition of ten guineas for six months. The agony of separation from Sarah drove him to submerge his feelings, to bury them in professional achievement. He came to be recognized as a bright, promising scholar and in 1820, he was recommended to the medical school at Edinburgh University. In 1821, he traveled to France and spent

the year as student to Rene Laennec at the Charité Hospital in Paris. The monaural wooden stethoscope had just been invented and Thomas quickly learned the new art of mediate auscultation.

On October 5, 1822, having returned from his sojourn, he presented a paper at Guy's Hospital on the principles of stethoscopy. His lecture was met with indifference by many, but William Stroud was so impressed that he soon developed the flexible monaural stethoscope. (One should not be too surprised at the tepid response to Laennec's creation. In the first American edition of Laennec's *Treatise on the Diseases of the Chest*, John Forbes MD prefaced the book as follows: "That it will ever come into general use notwithstanding its value, I am extremely doubtful; because its beneficial application requires much time and gives a good bit of trouble both to the patient and the practitioner... It must be confessed that there is something even ludicrous in the picture of a grave physician proudly listening through a long tube applied to the patient's thorax, as if the disease were a living being that could communicate its condition ....")

In 1828, Thomas published a short paper in the *Medical Gazette of London* entitled, "On Retroversion of the Valves of the Aorta," in which he first described a musical "purring, thrilling or sawing kind of noise" in association with retroversion of an aortic cusp. He termed it the *bruit de scie* and it is sometimes eponymously associated with his name.

Shortly thereafter, Thomas was appointed Director of Pathology at Guy's Hospital. Officially, his title was Curator of the Dead. There he spent the next fifteen years meticulously performing autopsies and cheerfully teaching on ward rounds. The students loved him, voting him unanimously as their favorite instructor.

It was about this time in his life that Thomas met an influential Jewish family. They became private patients of his and their oldest son Moses soon became his best friend. They were originally silk merchants from Spain and had emigrated with their wealth to England. Once established in London, Moses and his brother had applied for and received a seat on the illustrious London Stock Exchange. They were the first Jews approved for this prestigious position.

Soon Moses had augmented his original fortune manifold times. He married into the Rothschild family, the renowned banking moguls, and at age forty retired to devote his energy and huge resources to public and private charities. He was an Orthodox Jew and donated much of his opulence to building schools and hospitals, and founding agricultural settlements in Palestine. He was appointed Sheriff of London and, in 1837, was knighted by Queen Victoria.

Thomas, too, was accomplishing some important



goals. In 1832, *The Journal of the Medical and Chirurgical Society of London* published his paper, "Some Morbid Appearances of the Adsorbent Glands and Spleen," which received favorable critical acclaim.

And then came the catastrophic event which would end his career.

On Wednesday, the 6th of September 1837, twenty-six members of the Board of Directors of Guy's Hospital sat around a large oak table. Dr. James Chomley, Medical Director of the hospital -- officially termed Physician to Guy's Hospital -- had just died. The Board had unanimously voted for Dr. Thomas Addison to replace him. Now they had to vote on someone to fill the post of Assistant Physician to Guy's Hospital which had been vacated by Addison.

There were officially seven candidates. However, everyone connected with the hospital knew that only two names were to be considered at that meeting. One, of course, was the popular, admired and likeable Curator of the Dead -- the Quaker physician, Thomas. The second was Dr. Benjamin Babington whose sister was Richard Bright's wife, and whose father had been an admired and respected Physician to Guy's from 1795-1811.

The hospital treasurer spoke first: "I shall countenance no one at Guy's Hospital who is seen in the company of American Indians" -- a reference to Thomas and his Aborigine Society. The Board voted. Thomas received but two votes and Benjamin Babington became the new Assistant Physician.

Thomas resigned. He never again set foot in Guy's Hospital, or taught another student, or wrote another medical paper. It was the second great catastrophe of his life -- the first, of course, his inability to marry his beloved Sarah.

Moses took his friend Thomas away. They travelled many times to the European continent and to the Holy Land in pursuit of philanthropic endeavors.

In the spring of 1866, Thomas made his last journey. There had been a severe locust infestation in Palestine and the crops had been decimated. Moses and Thomas proceeded there to see if they could assist in the relief efforts for the starving population.

Thomas was not well when they left. By the time they arrived in Alexandria, Egypt, he was gravely ill and could go no further. He remained with the British Consular agent and was attended by Dr. Socci, an Egyptian physician. On April 4, 1866 at 5:15 pm, Thomas died of dysentery.

His grieving friend Moses wrote, "It has pleased the All Mighty to take him from us...one so guileless, so pious, so amiable in his private life...so respected in his public career, and so desirous to assist with all his heart in the amelioration of the condition of the Human race."

Thomas was buried in a small cemetery in Jaffa near the Tabatha Girl's School. An obelisk was erected in front of his grave by his bereaved friend Moses. It says simply:

*Here rests the body of Thomas Hodgkin MD of Bedford Square, London.*

It is now overgrown with weeds.

Hodgkin's name, of course, has been bequeathed to medical posterity for his original description of the disease which bears it. That report was based strictly on gross anatomic description of six cases examined by him at Guy's Hospital. (Microscopes were available to physicians of that era. However, they were used only to explore liquid specimens. The microtome, an instrument capable of slicing solid tissue into sections thin enough to be viewed by the microscopist, was not invented by Schwann until 1838 -- after Hodgkin had left Guy's Hospital.)

In 1926, Herbert Fox, a New York pathologist, microscopically re-examined the tissue specimens from which Hodgkin had reached his conclusions. He reported one was tuberculosis, a second syphilis, and a third was a non-Hodgkin's lymphoma. Only three of the original specimens actually represented Hodgkin's Disease.

Moses died twenty years after Hodgkin. His full name was Sir Moses Haim Montefiore. And, there exists a monument to him as well.

In the Bronx, New York.

It's called Montefiore Hospital. ■

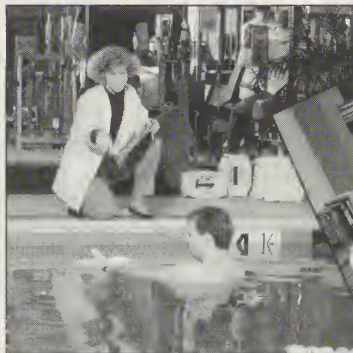


"MODERN REHABILITATION  
TAKES SOPHISTICATED  
EQUIPMENT AND THE  
EXPERTISE OF PHYSICAL  
THERAPISTS WHO NEVER  
FORGET THE HUMAN  
ELEMENT BEHIND EVERY  
PATIENT

CENTER PHILOSOPHY

WHEN THE PEOPLE WHO OWN A TREATMENT FACILITY ARE PHYSICAL THERAPISTS, IT SHOWS. AT THE MARYLAND CENTER FOR PHYSICAL THERAPY, IT SHOWS IN OUR STATE OF THE ART FACILITY AND IN THE FINEST EQUIPMENT AVAILABLE. AND IT SHOWS IN THE LEVEL OF PERSONAL CARE OUR DEDICATED PHYSICAL THERAPISTS PROVIDE.

SO WHETHER YOU NEED ORTHOPEDIC OR NEUROLOGICAL PHYSICAL THERAPY, OR TREATMENT FOR ARTHRITIS OR BACK PAIN, YOU CAN COUNT ON OUR EXPERTISE AND OUR CARING HANDS. LET US SHOW YOU THE SCIENCE AND ART OF THE HEALING PROCESS.



MCPT OWINGS MILLS • 2 PARK CENTER COURT, OWINGS MILLS, MD 21117  
301-363-7123 FAX 356-4153

MCPT HUNT VALLEY, P.A. • SHAWAN PLACE, 5 SHAWAN RD., HUNT VALLEY, MD 21030  
301-771-1777 FAX 771-1780

MARYLAND  
CENTER FOR  
PHYSICAL THERAPY





# The President's Letter

Prepared by the President of the Medical and Chirurgical Faculty of Maryland as a service to its members



Medical  
and Chirurgical Faculty  
of Maryland

September 1991

Dear Colleague:

By now, many of you are aware of the dramatic increase in the licensure fee initiated by the Board of Physician Quality Assurance (BPQA). In the event that you fall in the A-M billing cycle, be prepared to spend \$450 next year for your two-year renewal. As your President, I feel compelled to make you aware of the manner in which this occurred and the implications of the Board's action.

In February 1991, the Executive Committee was warned by the BPQA of the distinct possibility that it would need to ask for a substantial increase in order to fulfill its charge. Not very long before, an independent evaluation of the Board's function indicated that there was not sufficient budgetary allowance to meet the rising need for physician investigation and discipline. In effect, we were being asked to pay more to be policed more efficiently.

Although we could certainly support some increase in licensure fee, I protested that the magnitude of the increase was excessive. I appealed for time to prepare our membership for any change and asked to be made aware of any occasion at which we could provide input as to the amount of the increase.

The rest, as they say, is history. Bureaucratic wheels were set in motion and the opportunity to alert our members was lost. Subsequent testimony by Med Chi and other groups was given at open hearings only after emergency authorization was given to the BPQA to raise licensure fees.

The BPQA is not Med Chi. We are distinctly different bodies linked only by Med Chi's ability to submit candidates for membership on the BPQA, subject to the final approval of the Governor. However, one vital function of the BPQA is to review and act on complaints investigated by Med Chi and its component medical societies. Med Chi's involvement is non-negotiable! Any attempt at usurping our authority will be strongly challenged.

The Board now has its emergency funding and the next few years will be critical to its survival. Med Chi looks forward to continuing its role in peer review.

Sincerely,

A handwritten signature in black ink, appearing to be "J. David Nagel".

J. David Nagel MD  
President

# Executive Director's Newsletter

September 1991

---

## 1991 Semiannual Meeting

---

Med Chi's 1991 Semiannual Meeting will be held September 13-15, 1991 at the Carousel Hotel and Resort in Ocean City. All Maryland physicians are encouraged to attend and voice their opinions during the following panel discussions:

*Radiation Technologist Standards* - Saturday, September 14, 8:30 a.m.

All physicians are encouraged to participate in this discussion which may create standards for a new class of technician called "x-ray assistant."

*Mammography Center Screenings* - Saturday, September 14, 8:30 a.m.

Physicians attending this meeting will help promulgate standards for mammography centers in Maryland. These standards will include equipment specifications, monitoring and maintenance, image quality, recordkeeping, and review of data.

*Practice Protocol for Physicians with HIV* - Saturday, September 14, 10:30 a.m.

Physicians are invited to comment on a draft protocol for physicians infected with HIV. The Maryland General Assembly charged Med Chi to develop this protocol, in consultation with the Centers for Disease Control, the Maryland Hospital Association, and the Department of Health and Mental Hygiene, and present it to the Legislature in December 1991.

AMA Trustee Robert McAfee MD will be the special guest speaker during this meeting and will address the Med Chi House of Delegates on Saturday, September 14, 1991 at 1:15 p.m. Other sessions scheduled for the meeting include sessions on Smoking Cessation, Computers, Advanced Lung Cancer, and Long-term Health Care.

A program and registration form for Med Chi's 1991 Semiannual Meeting appear on pages 816 - 817 of this MMJ.

---

## Physician Disclosure of Ownership in Health Care Services

---

Effective July 1, 1991, Maryland law requires physicians to post a notice in their office(s) regarding their ownership of health care services to which they refer patients. Med Chi encourages all physicians to tear out and display the "To My Patients" disclosure of ownership sign that follows this newsletter. A copy of the law (§ 1-206 of the Health Occupations Article of the *Annotated Code of Maryland*) appears on the reverse side of the sign. Additional signs can be obtained by calling Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056.

---

## Physician Licensure Fees

---

Effective July 1, 1991, the Board of Physician Quality Assurance was granted the authority to increase physician licensure fees under an emergency regulation authorized by the Joint Committee on Administrative, Executive and Legislative Review. The emergency regulations were published in the July 12, 1991 *Maryland Register*. On July 24, 1991, Med Chi testified against the institution of the emergency regulations and against the Board's proposal to make the increase in fees a permanent change.

Med Chi expressed its concern over the magnitude of the increase, the detrimental effect of the increased fees on retired physicians, young physicians, semi-retired physicians, rural physicians, family practitioners, and out-of-state physicians. Of further concern to Med Chi was how the Board intended to use the additional funds. The Board stated that its reason for increasing the fees was to cover its operational expenses.

Despite arguments at the July 24th meeting by Med Chi and several other organizations including the Maryland Orthopaedic Society, the Maryland Hospital Association, and the Baltimore City Medical Society against increasing licensure fees, the Board voted to support the emergency regulations and to move ahead with its proposal to permanently increase the fees. The proposal to permanently increase the fees will be published in the *Maryland Register* in August or September 1991. Maryland physicians are urged to write the Board immediately and formally express their concern regarding the drastic increase in licensure fees. The address



is: Board of Physician Quality Assurance, P.O. Box 2571, Baltimore, MD 21215-0095.

The increased fees to be published in the *Maryland Register* were reported as follows:

A. Examination fees	
(1) Federation of State Medical Boards physician licensure examination, Part I .....	\$415
(2) Federation of State Medical Boards physician licensure examination, Part II .....	\$505
(3) Federation of State Medical Boards physician licensure examination, Parts I and II .....	\$770
(4) Federation of State Medical Boards physicians special purpose examination .....	\$350
B. Licensure fees	
(1) Original physician or osteopath license, American school graduate .....	\$400
(2) Original physician or osteopath license, foreign school graduate .....	\$400
(3) Foreign credentials education fee .....	\$100
(4) Physician inactive license fee .....	\$50
(5) Physician rehabilitation program fee .....	\$50
(6) Postgraduate teaching license fee .....	\$200
(7) Unlicensed medical practitioner registration fee .....	\$50
C. Renewal fees	
(1) Physician biannual license renewal .....	\$400
(2) Physician rehabilitation program fee .....	\$50
(3) Late renewal fee .....	\$50
D. Reinstatement fees	
(1) Physician reinstatement fee .....	\$450
(2) Physician rehabilitation program fee .....	\$50
F. Other fees:	
(1) Replacement of license fee .....	\$75
(2) Replacement of registration fee .....	\$25
(3) Registration of professional corporation .....	\$50
(4) Copy of grades .....	\$30

Members with questions or comments about physician licensure fees or any of the crucial medical issues facing Maryland physicians today are encouraged to become involved and contact Med Chi with your concerns.

---

## Medicaid Provider Fee Project

---

Maryland Department of Health and Mental Hygiene Secretary, Nelson Sabatini, addressed the Med Chi Council on July 18, 1991 and responded to several questions regarding the Medicaid Provider Fee Project. Mr. Sabatini has indicated that he is willing to meet with physicians and respond to questions about this project. If you are interested in such a meeting, contact Roseanne M. Matricciani, Assistant Executive Director for Health Care Policy, at 301-539-0872 or 1-800-492-1056.

---

## Medicare Fee Schedule

---

On June 5, 1990, the Health Care Financing Administration (HCFA) published a "Notice of Proposed Rule Making" in the *Federal Register* outlining the new Medicare fee schedule. In July and August, Med Chi sent HCFA the following letters outlining several concerns about the implications the fee schedule will have on medical care:

July 30, 1991

Gail Wilensky PhD, Administrator  
Health Care Financing Administration  
Department of Health and Human Services  
Attention: BPD-712-P  
P.O. Box 26686  
Baltimore, Maryland 21207

Dear Dr. Wilensky:

The Medical and Chirurgical Faculty of Maryland (Med Chi) represents approximately 7,000 Maryland physicians. These physicians represent general practice and specialty practices. They provide care for Medicare patients whether on an assigned or unassigned basis. However, after reviewing the Health Care Financing Administration's (HCFA) Notice of Proposed Rule Making (NPRM), which appeared in the June 5, 1991 *Federal Register*, and estimating the impact of the proposed fee schedule on their ability to practice quality medicine, many of these physicians have serious concerns that they may not be able to treat Medicare patients in the same numbers as they have in the past.

It has been the understanding of the Faculty that Medicare physician payment reform would be implemented in a fair and reasonable manner. According to legislative history, this system was not to be used as a budget cutting device. Specifically, Congress emphasized that the transition to the new payment system should be implemented on a budget

neutral basis. HCFA's proposed rules, however, threaten to negate Congressional intent and undermine the new payment system. These proposed rules are a sad testimony to the physician community which placed aside special interests and worked with Congress and HCFA to improve the Medicare payment system. Med Chi, therefore, is responding to HCFA's request for comments on the NPRM.

#### CONVERSION FACTOR

Of particular concern is the proposed *16 percent reduction in the conversion factor* (the monetary multiplier that converts relative value units into payment amounts). This reduction far exceeds the budget neutrality directive from Congress. In fact, it appears as if HCFA decided to use the new payment system merely as a budget cutting device. The assumption that physicians will automatically increase volume and intensity of services to compensate for decreased revenues is unreasonable and demeaning to physicians.

Many practicing physicians have full schedules and are too busy to increase volume merely to recoup 50 percent of potential income losses. While it is true that the Physician Payment Review Commission (PPRC) stated that "time-series studies suggest that the volume of services will respond to fee changes," PPRC further stated that "the magnitude of that response is still quite uncertain." HCFA, however, has assumed that expenditures will increase by \$.50 for every \$1 payment reduction as physicians offset payment cuts. This assumption does not have documented proof. Furthermore, HCFA admits that these volume changes could occur because of behavioral changes on the part of beneficiaries. It appears, therefore, that HCFA should be educating beneficiaries not further reducing the conversion factor. The fact, however, that HCFA has chosen to apply all of their adjustments to the conversion factor has resulted in an unfair and unreasonable proposal for implementing physician payment reform. Therefore, Med Chi urges HCFA to uphold the Congressional intention of budget neutrality by: (1) *not* applying the behavioral offset; (2) *eliminating* the tripling effect of applying *all* adjustments to the conversion factor; and (3) *not* reducing the conversion factor to correct for the transition adjustments. These drastic reductions in the conversion factor have eroded physician trust in physician payment reform being implemented in a fair and budget neutral manner. More importantly, however, very low reimbursement will adversely affect accessibility to quality care for our senior citizens.

#### GLOBAL SURGERY POLICY

With regard to HCFA's global surgery policy, a thirty-day preoperative period, which includes *all* preoperative visits by the surgeon, whether inpatient or outpatient, is not practical. Since a presumption will be made by the carrier that any visit occurring during this preoperative period is part of the global surgery package, having to justify every service delivered during that time period accentuates the **hassle factor** and *increases the cost of claims processing*. Med Chi urges that HCFA consider a seven-day preoperative period which would be more realistic and less costly.

Furthermore, evaluation by an anesthesiologist prior to surgery should not be included in the global surgery policy. Many hospitals *require* that patients who present certain risk factors *must* undergo an anesthesiology workup prior to surgery. Senior citizens usually fall into this category. This issue is a quality of care issue and should not be part of a global surgery policy.

Another very important concern is the issue of preoperative care when a patient has evidence of a previous medical history either related or non-related to the patient's primary presentation. In these circumstances, an evaluation by a family practitioner, internist, or in specialized cases, a specialist, is usually required. For example, a patient with a complicated history of cardiac disease may be admitted to the hospital for gallbladder surgery. A cardiac consultation is required to determine if the patient is stable or unstable with regard to the cardiac condition. A determination must be made about adjusting medications during this period. The surgeon performing the abdominal surgery does not ordinarily make these decisions. Therefore, Med Chi recommends that when other generalists or specialists provide expertise for diagnosing and stabilizing the patient prior to surgery, these physicians should be compensated for the services they perform.

Also, when a complex patient is admitted for surgery, it is inconceivable to think that every surgeon will be able to act as a cardiologist, infectious disease specialist, oncologist, etc., in managing the care of the patient. It is just as preposterous to assume that **medical emergencies** can be cared for by the **surgeon** as it is to assume that an **internal medicine physician** can perform the **surgery**. Med Chi, therefore, strongly recommends that co-management be compensated in cases where the patient requires the expertise of practitioners other than the surgeon.

The global surgery fee includes intraoperative services that are a "usual and necessary" part of a surgical procedure. There are many instances, however, when two separate and distinct procedures may be required and performed at the same time. Med Chi suggests that HCFA work closely with the American College of Surgeons and other specialty societies to identify intraoperative services which should be included in the global surgery package.

While all medically necessary return trips to the operating room would be billed separately and paid for, under the global surgery policy they would be reimbursed at a reduced rate (50 percent of the value of the intraoperative services originally performed). The reduced reimbursement for medically necessary surgical services does not take into consideration the complexity of the return trip to the operating room. Therefore, there should *not* be a reduced rate for re-operations for complications following surgery.



With regard to complications following surgery (e.g., stroke, heart attack, stress ulcer, etc.), complications which must be managed medically should *not* be included in the global surgery policy since separate medical diagnosis, evaluation, and treatment would be required for these complications. The regulations should specify that these "medical" complications will not be included in the global surgery package.

Although HCFA proposes a ninety-day postoperative period be included in the global fee, some surgeries may require a *longer* recuperative period for complete recovery. It is Med Chi's suggestion that HCFA work closely with the American College of Surgeons and other specialty societies to identify those surgeries requiring a longer recuperative period.

#### **GLOBAL PACKAGE - MINOR SURGERIES & SCOPIES**

Under the NPRM, if a minor surgical procedure or "scopy" is performed the same day as a visit, the visit will not be paid for unless a documented, separately identifiable service is furnished. Also, recovery from the procedure (thirty-day postoperative period) is included in the global package. Considering all of the various "scopies" and minor surgeries, it is inconceivable to think that HCFA is lumping together such procedures as colonoscopies, pancreatic cannulations, and cystoscopies. It appears that complexity and extensiveness of the procedure were not considered when this policy was formulated. Therefore, the global concept should *not* be applied to minor surgeries and "scopies." Furthermore, Med Chi disagrees with HCFA's position that a "visit" not be allowed when provided on the same day as a surgical procedure without separate documentation to substantiate the fact that the visit was separate and apart from the procedure. The physician should be allowed to bill to reflect the actual services which he/she performed.

#### **LIMITED LICENSE PRACTITIONER SERVICES**

Medicare's statutory definition of "physician" includes optometrists, dentists, oral and maxillofacial surgeons, podiatrists, and chiropractors. These "limited license practitioners" will be paid the full amount of the new Medicare *physician* payment schedule if they furnish specific services for which Medicare considers them to be physicians. Physicians and "limited license practitioners" do not have the same training, diagnostic approach, or skilled approach. Non-MD/DO providers should *not* be considered physicians (they do not practice medicine) by Medicare, and the Medicare RBRVS developed for MD/DO providers should *not* be applied to non-MD/DO providers.

#### **SITE OF SERVICE DIFFERENTIALS**

With regard to site of service differentials, HCFA proposes to reduce the practice expense relative value unit (RVU) by 50 percent when a procedure that is performed at least 50 percent of the time in an office setting is performed in an outpatient department. Unfortunately, this policy does not consider variations in practice and does not address situations where hospital-based physicians must pay for their own overhead including rental of office space, supplies, etc. Also, physicians who are unable to provide this identified care in their offices will be penalized. Therefore, Med Chi suggests that this proposal be withdrawn and the above issues be considered before setting a policy on this issue. Another comment period should be allowed before a final rule is established.

#### **PAYMENT FOR DRUGS INCIDENT TO A PHYSICIAN'S SERVICE**

HCFA has determined that payment for drugs furnished incident to a physician's service is limited to *85 percent of the national average wholesale price of the drug* as determined by HCFA. Payment for high cost or high volume drugs (as identified by HCFA) would be paid the *lower* of the estimated acquisition cost as determined by HCFA or 85 percent of the national average wholesale price for the drug. While HCFA may believe that physicians are able to obtain the same discounts as pharmacies, that presumption is a fallacy. Physicians usually do not buy medications in bulk supplies; they deal in much lower volumes than pharmacies and are *not* provided with drugs at wholesale rates. Physicians, particularly those in smaller practices, cannot afford to absorb the added cost for providing necessary medications to their Medicare patients. This proposed rule will greatly inconvenience the beneficiary and increase the cost to the beneficiary since medications will have to be purchased directly from the pharmacy and this situation will require a return trip to the physician's office for administration of the drug. Therefore, Med Chi urges HCFA *not* to implement this policy.

#### **ANESTHESIA SERVICES**

With regard to anesthesia services, HCFA is proposing to eliminate the time units and use the average time for each service and its value in the relative value guide (RVG) to develop the physician work RVUs for each anesthesia service. Because anesthesia services are unique and vary widely (case mix, surgical times, etc.), and because teaching physicians and physicians who handle a large percentage of complex cases would be severely penalized under the proposed rule, Med Chi supports the continued use of the *actual* rather than the average time.

#### **ELECTROCARDIOGRAMS**

Med Chi realizes that the statutory prohibition for payment of EKGs in conjunction with a visit or consultation restricts HCFA's options. (Med Chi opposes this statutory prohibition.) However, HCFA's proposed rule regarding EKGs goes far beyond Congressional intent. In particular, the statute prohibits separate payment for EKGs when: "payment is made under this part for a visit to a physician or consultation with a physician and, as a part of or in conjunction with the visit or consultation there is an EKG performed or ordered to be performed ...". It is apparent that the statute is referring to the situation in which the ordering physician is also the physician interpreting the EKG. HCFA's proposed rule, however, covers many more situations where no payment would be made to the physician

who interpreted the EKG even though the physician had provided services for which he/she would provide recognized RVUs.

It is unrealistic to think that EKG interpretation requires little expertise. In fact, facilities in many urban and rural areas contract with cardiologists or internists with cardiology experience to provide this special expertise to physicians less skilled in this area. Furthermore, these physicians, who must demonstrate special expertise, are granted franchises by hospitals for the interpretation of cardiology graphics. In exchange for this franchise, such physicians are responsible for supervision of the Coronary Care Unit with daily rounds and triage *without further compensation*. They are responsible for hospital clinics to provide cardiology services to *indigent* and other *non-paying* patients, again, without further compensation. These physicians also assume responsibility for the training of technical personnel, select and supervise the maintenance of equipment, and assure access to cardiology services for all patients. Once again, these services are *without further compensation*. The only compensation that these physicians do receive is that of a professional component for graphics. HCFA's proposed rule, therefore, cannot be implemented without seriously compromising Medicare patients' access to quality cardiology services. It is unrealistic to believe that surgeons, emergency room physicians, and others will pay the cardiologist for the interpretation of their EKGs. Of course, it is just as unrealistic to assume that these practitioners can always interpret their own tests. Therefore, Med Chi strongly objects as incomprehensible that this required service is not compensated when *the ordering physician is not the interpreting physician*.

#### PHYSICIANS WHO ASSIST AT SURGERY

Although the Omnibus Budget Reconciliation Act of 1990 sets a new payment methodology for assistants at surgery, Med Chi is concerned about situations in which an assistant at surgery may be required because of quality considerations. Med Chi recommends, therefore, that HCFA recognize these quality issues and the need to be flexible when setting coverage standards for assistants at surgery.

#### PAYMENT FOR SERVICES AND SUPPLIES INCIDENT TO A PHYSICIAN'S SERVICE

For certain facility-based services performed in office settings, HCFA proposes to establish a separate fee schedule allowance for certain medical supplies. While Med Chi appreciates HCFA's recognition of the importance of payment for such supplies, we suggest that HCFA work closely with specialty societies to determine the expansion of this list. Furthermore, Med Chi suggests that payment for supplies should be allowed where the physician can justify the provision of supplies beyond this list.

#### NEW PHYSICIAN ADJUSTMENT

Congress has provided for lower payment schedule amounts for new physicians in their first four years of practice. Med Chi is opposed to this provision under a resource-based payment methodology and supports the AMA in its efforts to repeal this law. However, with regard to the proposed rule, Med Chi believes that HCFA has extended the payment limitations beyond the four-year period. Therefore, Med Chi supports the recommendation by the AMA to rewrite §415.38(c) as follows: "Definition of years of practice. (1) The first year of practice is the CY ending on December 31 during which the physician, PT or OT furnishes professional services for which payment may be made under Part B."

Furthermore, Med Chi is opposed to extending the payment limitations to new physicians in group practices. Besides causing bookkeeping problems and administrative hassles, this extension has the potential of shutting young physicians out of group practices and shifting Medicare patients away from new physicians. Med Chi strongly opposes this extension of the payment limitations.

#### CONSULTATIVE PATHOLOGY SERVICES

HCFA proposes that consultative pathology services must "relate to a test result that lies outside the clinically significant normal or expected range in view of the condition of the patient." This statement makes the assumption that the requested consultative service was not beneficial to the patient and penalizes the pathologist who provided his or her expertise at the request of another physician. Therefore, Med Chi supports the AMA's recommendation that §405.556(b)(2) be reworded by adding the following language at the end: "...or that provides beneficial direction in the care of the patient;"

#### OTHER CONSIDERATIONS

Med Chi supports the comments made by the AMA concerning the conversion factor, relative value units, geographic practice cost indices, payment localities, modifiers, technical components of services and diagnostic tests, and comparability. (See Comments of the American Medical Association to the Health Care Financing Administration, July 27, 1991.)

#### CONCLUSION

Med Chi appreciates the opportunity to comment upon HCFA's proposed regulations. It is the Faculty's sincere hope that the comments submitted by the AMA, Med Chi and other state, component, and specialty societies will prove helpful to HCFA in the tremendous task of developing final regulations.

Sincerely,  
Marvin Schneider MD  
Chairman of Council



August 2, 1991

Dear Dr. Wilensky:

On July 30, 1991, I mailed you an eight-page letter citing the position of the physicians in Maryland concerning the Health Care Financing Administration's (HCFA) Notice of Proposed Rule Making. Since that time, I am continuing to hear from physicians across the State who believe that while the comments in my earlier letter were appropriate, there still exists a need to emphasize the issue of payment for electrocardiogram (EKG) interpretation.

While I previously stated that it was realistic to think that the interpretation of EKGs requires little expertise, I want to ensure the clarity with which this comment was made. Specifically, I want to stress the importance of HCFA realizing that non-payment of EKG interpretation will have an exceptionally strong and negative impact on patient care. Therefore, it is the Faculty's position, as previously stated, that it is incomprehensible that this entire EKG interpretation service is not compensated when the ordering physician is other than the interpreting physician.

Thank you for your consideration in this matter.

Sincerely,  
Marvin Schneider MD  
Chairman of Council

Med Chi intends to keep physicians apprised of new developments with the Medicare fee schedule. For questions regarding Medicare, contact Roseanne M. Matricciani, Assistant Executive Director for Health Care Policy at 301-539-0872 or 1-800-492-1056.

---

## Council Elects New Treasurer & Secretary

---

On July 18, 1991, the Med Chi Council elected a new treasurer and secretary. Albert L. Blumberg MD of Baltimore was elected Treasurer (1991-1992) and Treasurer Elect (1992-1993). Carol W. Garvey MD of Rockville was elected Secretary (1991-1992) and Secretary Elect (1992-1993). Because both officers were elected to fill vacancies in those positions, Drs. Blumberg and Garvey will assume their offices immediately.

---

## Physicians with HIV

---

During a Board of Physician Quality Assurance meeting on July 24, 1991, the Board proposed to interpret HO §14-404 to include *inter alia* that it is unprofessional conduct for a physician infected with HIV or Hepatitis B to perform invasive procedures without the written consent of the patient. Med Chi testified against this proposal stating that Med Chi is currently developing guidelines for physicians infected with HIV which will be presented to the Legislature in December 1991. Following this testimony, the Board voted to table this proposal until December after the Legislature reviews Med Chi's protocol.

---

## Med Chi Responds to Senator Helms Bill on AIDS

---

In July, following the passage of an AIDS bill in the U.S. Senate that would impose a minimum ten-year prison sentence on health care workers infected with HIV who provide treatment to patients without disclosing their HIV status, Med Chi sent letters to all U.S. Representatives and Senators from Maryland urging them to vote against such legislation. Med Chi encourages all Maryland physicians to write their congressional representatives in support of Med Chi's position on this issue. A copy of the letter sent to Maryland congresspersons is provided below for your reference. For more questions or information regarding this issue contact Betsy Newman in Med Chi's Public Relations Department at 301-539-0872 or 1-800-492-1056.

July 26, 1991

The Honorable Paul S. Sarbanes  
The United States Senate  
Washington, DC 20510

Dear Senator Sarbanes:

On behalf of the physicians of Maryland, I urge you to vote against any legislation that would: mandate testing of health care workers for the Human Immunodeficiency Virus (HIV), impose criminal penalties on HIV-infected health care workers who perform invasive procedures, or revoke the license of a health care worker who does not follow the Centers for Disease Control (CDC) guidelines.

Any attempt to pass such legislation would not be based on scientific data regarding the AIDS epidemic but would rather be a reaction to unfounded public fear. At this time, there has been no identified case of HIV transmission from physician to patient. The only case of possible HIV transmission from health care worker to patient represents a highly

speculative situation of five patients infected in a dentist's office. This constitutes an extremely improbable occurrence even under the broadest interpretation of the CDC model of transmission.

HIV is a very difficult virus to transmit. The CDC estimates that a patient's chances of becoming infected with HIV by a physician are, at most, one in 41,000 and possibly as small as one in 2.6 million. Physicians must assure their patients that transmission occurs primarily through sexual contact and IV drug use – not by visiting their physician or hospital. Physicians need to educate their patients regarding the proper precautions necessary to prevent the spread of HIV. It would be unconscionable to criminalize the delivery of medical or dental treatment by HIV-infected health care professionals, especially in cases where the disease has not been transmitted.

The Medical and Chirurgical Faculty of Maryland (Med Chi, the state medical society), in consultation with the Centers for Disease Control, the Maryland Hospital Association and the Department of Health and Mental Hygiene, is currently developing a practice protocol for physicians infected with HIV. This protocol, which is based on CDC guidelines, will be presented to the Maryland Legislature on December 2, 1991. Any action regarding HIV positive physicians should be based on scientific data contained in the CDC guidelines and not on hearsay and hysteria.

Med Chi strongly supports the CDC guidelines as the best mechanism to protect health care workers and their patients. According to the CDC, no physician or hospital worker has transmitted HIV to his or her patients, but everyday, health care workers are exposed to the virus in the patients they serve. To date, legislation has not addressed protecting the hundreds of health care workers infected every year by a needle stick or blood splatter in the line of duty.

Med Chi hopes you will consider these facts when voting on any legislation relating to HIV-infected health care workers. Med Chi believes that only through the application of sound medical principles, rather than through the criminal justice system, will society be able to confront the issues of HIV-infected health care workers rationally and compassionately and thus ensure the safety and health of all our patients.

Sincerely,  
J. David Nagel MD  
President

---

## *New Med Chi No Smoking Policy*

---

On July 18, 1991, the Council affirmed a new "No Smoking" policy within the Med Chi Faculty Buildings. The Council also adopted a "No Smoking" policy during all official events of the Faculty, irrespective of their location, e.g., during annual and semiannual meetings held in public buildings.

---

## *Drug Conference*

---

Med Chi's Second Annual Conference on Addiction and Physician Health will be held on Saturday, November 16, 1991 in the Med Chi Faculty Building. Providing seven Continuing Medical Education credits, this conference is designed to help health care professionals recognize and treat patients impaired by addiction. For program information and a registration form, see pages 808-809 of this MMJ.

---

## *Doctor/Lawyer/Teacher Partnership Against Drugs*

---

Baltimore County physicians interested in participating in the Doctor/Lawyer/Teacher Partnership Against Drugs are invited to attend one of two special training sessions at 6:00 p.m. on Tuesday, September 24 and Thursday, September 26 in the Med Chi Faculty Building. For more information about these sessions, contact Betsy Newman, Med Chi Public Relations, at 301-539-0872 or 1-800-492-1056.

---

## *President's Regional Conferences*

---

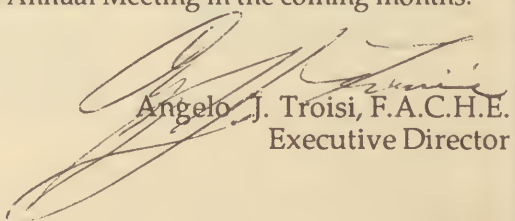
To keep the membership informed about vital medical practice issues, Med Chi has scheduled three President's Regional Conferences for 1990-1991 in western, eastern and southern Maryland. The first conference will be in western Maryland on Thursday, October 3, 1991 at the Sheraton in Hagerstown at 4:30 p.m. Med Chi will meet with physicians from the Eastern Shore on November 14, 1991 and with physicians in southern Maryland in the spring of 1992. Watch the Executive Director's Newsletter for bulletins and highlights of these conferences.

---

## *Annual Meeting at Baltimore's Omni*

---

Med Chi's Council voted on July 18, 1991 to hold Med Chi's 1992 Annual Meeting at the Omni International Hotel in Baltimore on Thursday-Saturday, April 30 - May 2, 1991. Med Chi encourages physicians to reserve these dates on their calendars. Watch for more information about the Annual Meeting in the coming months.

  
Angelo J. Troisi, F.A.C.H.E.  
Executive Director





# TO MY PATIENTS

When I refer you to a specific health care facility for medical tests or services, you may go to that facility or any other to have the tests or services completed. As you make this decision, I want you to know that I or members of my immediate family own a business interest in the following health care facilities:

---

Please feel free to ask me any questions you may have about your care. I am always interested in your continued good health.

---

Physician's Signature



☆ ☆ ☆ **IMPORTANT** ☆ ☆ ☆

***MARYLAND LAW REGARDING NOTICE OF OWNERSHIP  
OF OTHER HEALTH CARE SERVICES***

Effective July 1, 1991, Maryland law requires physicians to post a notice in their offices regarding their ownership of other health care services to which the physician refers patients. (see back)

The law, which is outlined in Section 1-206 of the Health Occupations Article of the Annotated Code of Maryland, states in part:

A health care practitioner may refer a patient or direct an employee of the practitioner to refer a patient to a health care service in which the practitioner, the practitioner's immediate family, or the practitioner in combination with the practitioner's immediate family owns a significant beneficial interest, if prior to the referral the practitioner:

(I) Except if an oral referral is made by telephone, provides the patient with a written statement that:

1. Discloses the existence of the ownership of the significant beneficial interest;
2. States that the patient may choose to obtain the health care service from another provider of the health care service; and
3. Requires the patient to acknowledge in writing receipt of the statement;

(II) Except if an oral referral is made by telephone, inserts in the medical record of the patient a copy of the written acknowledgement;

(III) Displays a written notice that is plainly visible to the patients of the practitioner disclosing all of the health care services:

1. In which the practitioner, the practitioner's immediate family, or the practitioner in combination with the practitioner's immediate family owns a significant beneficial interest; and
2. To which the practitioner refers patients; and

(IV) Documents in the medical record of the patient that:

1. A valid medical need exists for the referral; and
2. The practitioner has disclosed the existence of the significant beneficial interest to the patient.





# TOUGH, SMART AND YOURS

medical  
economics  
MAY 1991

**S**uccessfully defending a brain-damaged baby case is the courtroom equivalent of pitching a no-hitter. Because the "sympathy factor" can add millions to a jury's award, many insurance carriers would rather settle than fight.

Not so the P-I-E Mutual Insurance Co. of Cleveland, Ohio, and the 1-year-old law firm—Jacobson, Maynard, Tuschman & Kalur—that does all its defense work. In 21 brain-damaged baby cases, it has defended for the doctor-malpractice company, its record is a remarkable 19-1-1, the last a hung jury. In 1988, its over-all scorecard read 43 wins, 5 losses—all malpractice cases.

There's more to those numbers than luck. "Or even legal skill," adds JMT&K founding partner Aaron Jacobson, who was one of Ohio's leading plaintiff lawyers before he, Larry E. Rogers, Herbert S. Bell, M.D., and 20 other Cleveland doctors formed P-I-E in 1973.

It's the concept behind the firm that makes it work. Physician-specialty panels review every lawsuit to decide whether the defendant deviated significantly from the standard of care. If he did, we pay. If he didn't, we defend. Makes no difference whether it's a \$3,000 or a \$5 million case. We label it "No pay." That policy has resulted in a lot of cases being dropped. Perhaps more important, it's

## DON'T YOU WISH THESE DEFENSE LAWYERS WERE YOURS?

This big, multistate firm rarely loses a case. But it's more than luck, or even legal skill, that's behind its enviable record.

By Howard Eisenberg

discouraged the filing of many other cases. Plaintiffs' attorneys have learned that we're fair negotiators when our doctor's in the wrong, but won't back down when he's right."

That approach pays off. "According to the most recent report I've seen from the General Accounting Office," says Larry Rogers, P-I-E president and CEO, "in 1984, about 57 percent of medical-malpractice claims were closed without payment. Through 1988, we've closed an average of 76 percent of our cases without a dime changing hands. And it's my understanding that, without including defense costs, St. Paul Fire and Marine Insurance Co.'s 1988 average gross payout for cases closed in Ohio with payment was \$52,500. Our comparable figure was about \$10,000 below

theirs. That's partly why we can sell an ORG specialist in Ohio—an industrial state that ranks among the most litigious—\$1.2 million in coverage for just \$26,000."

The unique marriage of P-I-E and JMT&K has been so successful that the carrier has expanded into five other states: Indiana, Kentucky, Maryland, Missouri, and West Virginia. Where P-I-E goes, there goes JMT&K, with nine branch offices to date. The firm has 60 trial attorneys, and may well be the nation's largest devoted well-though exclusively to medical-malpractice defense.

Could the insurer-defender symbiosis, if duplicated by other doctor companies, make a significant contribution to reducing malpractice litigation nationwide? An up-close look at



how JMT&K operates may help to answer that question.

### Every lawyer develops a medical specialty

"Our firm's lawyers read more medical books than law books," says P-I-E Vice President Gerard C. Opienorth himself a veteran defense attorney. Robert Maynard explains, "New cases are discussed at our weekly staff meetings so that every lawyer is familiar with every case. But we assign cases to our attorneys according to medical specialty. They're well-versed in their fields, so they don't have to reinvent the wheel with each case."

Last year, the firm's ORG specialist, attorney Jerome S. Kalur, who had won 16 consecutive brain-damaged baby cases, faced one of his toughest challenges when he defended a GP

which attempted a malpractice delivery that ended in a C-section and a severely brain-injured baby. Recalls Kalur, "I didn't think the doctor had caused the damage, but our position was weakened by the fact that he didn't have malpractice privileges. Based on that departure from the standard of care, our doctor panel voted to settle, and, since the hospital was also involved, a combined sum of \$1.5 million was offered. Plaintiff turned us down flat."

"I wanted to depose the doctors who'd been involved in the mother's care during her hospitalization, but the attorney for the plaintiff baby insisted it would violate the mother's physician-patient confidentiality. That privilege would terminate automatically when her medical

The winning firm's four founders at Cleveland's 8th District Court of Appeals (from left): Jerome S. Kalur, Aaron Jacobson, James M. Tuschman, and Robert Maynard.

records were introduced at the trial end of the plaintiff's case. Meanwhile, I was in the no-win position of having to tell the jury. It couldn't have been the malpractice," without offering them another reasonable-learned-damage theory."

Fortunately, the plaintiffs rested their case on a Friday afternoon, giving JMT&K time for a weekend rally. "Twenty names later," says Kalur, "I was in the hospital pathologist's office with an order permitting me to view the mother's placental slides." Meconium staining had been charted, and Kalur had a hunch that fetal distress had begun long before the for-

**T**hey're seasoned attorneys with an incredible record of success.

Malpractice specialists in every medical specialty.

More than seventy lawyers in eleven offices: they're part of The P-I-E Mutual team ... Jacobson, Maynard, Tuschman & Kalur, a formidable defensive lineup, with an imposing record.

Three-quarters of all claims closed without a penny changing hands.

Ninety percent of the cases that go to trial won.

One of every four doctors will someday face a lawsuit. The P-I-E Mutual helps you face that future without fear. With a claims review committee made up of your peers. And a pre-paid law firm that can rally its total resources against any and all claims.

Call us for a reprint of the Medical Economics article. 1-800-228-2335. Tough and smart can soon be yours.



THE P-I-E MUTUAL  
INSURANCE COMPANY

NORTH POINT TOWER  
1001 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114-1149



WINTERICH-NEFF & ASSOCIATES  
7 EAST REDWOOD, SUITE 810  
BALTIMORE, MARYLAND 21202  
301-234-2800



# Meet the new team in town.

Maryland General Hospital of Baltimore has teamed up with Bryn Mawr Rehab of Malvern, Pennsylvania, one of the premier physical medicine and rehabilitation facilities in the country to form *Maryland General-Bryn Mawr Rehab Center*.

The new center, staffed by 50 of the finest rehab physicians, therapists, nurses and clinical specialists in the area, will offer the highest quality, comprehensive inpatient and outpatient rehabilitation services.

*Maryland General-Bryn Mawr Rehab Center* features 33 inpatient rehab beds with 15 devoted

to brain injured patients and 18 designated for orthopedic and neurological rehabilitation. Outpatient services are available at the Maryland General Campus in Baltimore and at our satellite health care centers in the neighboring communities of Catonsville and Timonium.

We invite you to meet the new team in town. Call Mary Filippelli, our Administrative Director at (301) 225-8380 to get all the details and to arrange for a tour of our new facility.

*Maryland General-Bryn Mawr Rehab Center.* When it comes to rehab care, we're strictly major league.



MARYLAND GENERAL  
BRYN MAWR REHAB CENTER

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380



## Drug Reps and Doctors Need Each Other

**D**rug reps have told me they have difficulty seeing about 50 percent of doctors. It seems that the more specialized the practice, the less willing is the doctor to be contacted by the drug rep. Cardiologists have a very poor record of acceptance of drug rep visits. An unwillingness to see a drug rep is not a good reputation to have.

Although some reps are better and more skilled than others, and some physicians are more capable than others, both groups are very dependent on each other. Both groups need to be aware of the problems and contributions of the other. It is the pharmaceutical industry that comes up with the new drugs we prescribe for our patients. It develops, manufactures, markets, and assumes the liability of all of the new drugs. Drug development is an enormously risky process. By the time most drugs reach the market, much of the patent protection has expired. Their profitability is soon destroyed by generic competitors who have assumed little or no risk and almost no development expense.

Another contribution of the pharmaceutical industry is its generous support of postgraduate education. Many medical meetings are completely funded by the industry. Most meetings have a token tuition which only supplements the funds contributed by the drug industry.

Advertising in medical journals is an annoyance to many physicians. Although we do not read the journals for the ads, we would have fewer journals available to read if it were not for the fact that the drug industry ads cover about 50 percent of the cost of many publications.

Some physicians are annoyed by the trips and dinners given by some of the drug companies. At times, I wonder if it is not "sour grapes" because their names were omitted from the guest lists. Perhaps if we are

more hospitable to the local drug reps, our names might appear on the next list.

It has been said with an air of holiness by some physicians that drug trips and dinners are not acceptable because the patients are paying the costs through prescription purchases. This may be true, but I believe hosting and courtesies given by the pharmaceutical industry are paltry compared to those given by the auto industry or other manufacturing and sales organizations which are paid for by the customers.

At times, the drug rep may leave a ballpoint pen, a paper weight, tote bag, or even a stethoscope as a gift for the physician. Some look with disdain on such forms of "bribery." If such small tokens alter your prescribing pattern, you can be bought more easily than you should admit is possible.

The drug reps are almost always college graduates, usually in a field allied to medicine. Most that I have talked with aspired to be physicians, but because of personal problems or lack of funds, could not complete their plans. They are first class people and are intent on helping every physician they call on to be a success in his or her practice. They are people with families, do community service, and want to be accepted by you.

Some physicians have rules such as only allowing a ten-minute visit or one visit every two to three months, or requiring a rep to make an appointment. If the drug reps are informed of this and are treated equally, I have never found one to be unhappy with the system.

Let us treat the drug reps coming to our offices with as much respect and consideration as we would our most loyal patients. See the rep as promptly and courteously as possible. We can help each other.

*DE WITTE, DE LAWTER MD*  
Bethesda



## Resource-based Relative Value Scale

When the Resource-based Relative Value Scale (RBRVS) first came onto the health policy scene, physicians supported it because it would introduce fairness and rationality into the Medicare payment system, unite the medical profession and, most of all, because it would be good for patients. But lately, many of my colleagues say they've become disillusioned with the RBRVS's implementation -- they don't trust the federal government to live up to its end of the bargain.

I don't trust the federal government to live up to its bargain, either -- at least not without concentrated pressure to do so. But I don't think the medical profession should write off the RBRVS. Despite many problems -- some immediate and some potential -- it can do what it was intended to do.

A clear benefit is that the RBRVS allows physicians to unite for a fair conversion factor and to oppose further cuts in the Medicare program, rather than engaging in internal squabbling. The conversion factor that makes the RBRVS into a real fee schedule applies to *all* physician services. That means the entire profession has a stake in making sure it's fair and an incentive to work *together* to stave off future Medicare cuts. In fact, every medical group, including the American Medical Association, the American Society of Internal Medicine, the American Academy of Family Physicians, and the American College of Surgeons, is opposing the Health Care Financing Administration's (HCFA's) proposal to lower the conversion factor. HCFA has assumed volume will increase and has set the conversion factor lower to make up for that assumed increase.

Under the RBRVS, relative values are expected to increase substantially for most evaluation and management (E/M) services. Unfortunately, the administration has set the dollar conversion factor too low to meet the requirements for budget neutrality mandated by Congress. This lowered conversion factor, if enacted, will cut Medicare expenditures by more than \$3 billion by 1986. Skeptics have suggested that the blame for lower gains for physicians under Medicare can be laid squarely at the feet of the RBRVS.

In fact, the RBRVS protects undervalued E/M services. By raising the relative values for E/M services, those services get a larger share of the Medicare dollars that will be spent on physician services -- even though the total dollars are being unacceptably reduced due to the administration's budget-driven cuts in the conversion factor.

Physicians can and should object to cuts in the conversion factor, while recognizing that all of our E/M services would have been worse off, given the proposed cuts, without the RBRVS. Medicare was right to support the RBRVS, and we are right to object to budget policies that undermine it.

It is true even with a fairer conversion factor, because of the elimination of geographic differentials and limits

on balance billing, for some there will be no actual gain (or even a reduction) for E/M services. Where physicians practice, how often they accept assignment, how much they charge in excess of Medicare's approved amount for unassigned claims, and their mix of services will determine the effect on their practices. *But regardless of each individual's gain or loss, the RBRVS will enhance payments overall for physicians' E/M services compared with what would have been the case otherwise.*

The RBRVS also provides a basis for opposing unfair cuts in specific procedures. For example, the profession can argue that the ban on reimbursement for most electrocardiogram (EKG) interpretation is contrary to the RBRVS, because the study said the service indeed has a value. The influential Physician Payment Review Commission agrees, giving the profession a real opportunity to get this cut reversed. Without the RBRVS, it would have been far more difficult to make that case.

Continued support for the RBRVS allows the profession to be for -- not just against -- something. If it weren't for the medical profession's support for the RBRVS, we'd all be worse off. No one can say that change wasn't coming. Those who don't like the RBRVS and limits on balance billing should consider the alternatives: mandatory assignment, MD-DRGs, and fees set by the government without any professional input. The RBRVS gives the profession a voice -- and it may enable us to ward off more objectionable measures.

Finally and most important, *the RBRVS is good for our patients.* It will increase the emphasis on preventive care and on evaluating and managing their treatment, and decrease the emphasis on costly high-tech services. It also will help improve access to care in underserved rural areas.

To paraphrase Mark Twain, reports of the death of the RBRVS are greatly exaggerated. But medicine can't rely on trust that everything will turn out okay. We must fight to preserve the promise of physician payment reform.

That means opposing policies that will undermine the RBRVS (such as a behavioral assumption that would lower the fee schedule conversion factor). It means working to change policies -- such as the ban on reimbursement for EKG interpretation -- that give with one hand and take away with the other. And, it means supporting further changes that will make the system even better.

The RBRVS unites physicians under one fair and rational payment system to fight future detrimental budget cuts in Medicare. Lawmakers faced with a divided house of medicine easily can use that division to cut Medicare payments even further. But, if they're faced with a profession that's united under the RBRVS, it won't be so easy.

Support for the RBRVS has been right -- for our profession and for our patients. The RBRVS will protect undervalued evaluation and management services in an era of Medicare budget-cutting, increase



access and the emphasis on preventive care for patients, and introduce fairness into the Medicare payment system. *But we must fight together -- as a profession -- to make sure it is implemented in the way Congress intended.*

J. LEONARD LICHTENFELD MD, FACP  
President, Maryland Society of Internal Medicine



### Provider Fee Project

This letter is directed to bring your attention, and other members of the Medical Society who read this Journal, to the new Provider Fee Project proposed by the State for the state-sponsored Medicaid Program. Enclosed is a letter I have directed to Mr. Joseph Davis in regards to this project and my decision to resign from participating in the Medicaid program. The letter is self-explanatory and I would be pleased if you would publish this in the *Maryland Medical Journal*. I believe that it is imperative that the doctors organize together through their Medical Society and start protesting these bureaucratic regulations.

May 28, 1991

Mr. Joseph E. Davis, Director  
Medical Care Operations  
Baltimore, Maryland 21201

Dear Mr. Davis:

Effective immediately, I resign as a participant in the Medicaid program for the State of Maryland. I have expressed to you in the past dissatisfactions with the administrative problems of the Medicaid program as it exists in this State and its fee reimbursement policy.

But last week I received a little pink piece of paper across my desk entitled "Notice to Providers." This has broken the camel's back. The little pink piece of paper was in regards to the Provider Fee Project developed by the State and our wonderful elected officials down in Annapolis. It is nothing more than a scam, unethical, immoral, to scrape more money into your Medicaid program by false padding of the bills that the doctor submits. I cannot participate in such a program.

I spoke with Mr. Fine this morning, and believe me, I think he is a fine young man who's got a horrible job. I told him I wouldn't take it for a million dollars. He tells me that he's had numerous phone calls from other physicians, all protesting the ethics of this bill which was passed by the Legislature and signed by the Governor. It is his job to try to make us happy. He admits that it's a scam, a legal scam according to the Attorney General. I'd like to see it tested in the Supreme Court before I take the word of the Attorney General on this.

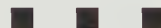
Basically, the project was developed by some smart boy somewhere reading the laws of the federal Medicaid and developed an idea where they could milk more money out of the federal government to cover the expenses of the program in the State. Mr. Fine gave me an example. Let us say that my fee for an office visit is \$50.00. In actuality it is much less. HCFA allows a 75th percentile billing to the federal program for that office visit. They bill the federal government \$40.00. They pay me \$21.00. The State takes home \$19.00 in profit which they didn't earn. If this is my only bill to the Medicaid program for the year, I am to report as income \$40.00 rather than the actual \$21.00 that I received and I am to write off an office expense as a "donation to the Provider Fee Project," \$19.00. And, the State runs scot-free with \$19.00 of federal money. I asked Mr. Fine, does he pay federal taxes as I do and he answered in the affirmative. I said, "Who is the federal government, but us? You are milking our tax dollars

to get more money into the State. This gives the federal government an excuse to increase taxation, because they've got increased expenses. Somewhere along the line, this chain letter has to break!! Since it is mandatory by law that I now bill in this manner, I cannot participate and I must resign from the program."

I will continue to examine and treat Medicaid patients. I will inform them that I no longer participate in the program and if they do have some available funds they will be expected to provide some form of payment for my services. I will adjust my fee according to the ability for them to pay. Those that are totally indigent and have no funds I will continue to treat for nothing, as I have been doing for many years.

Somewhere this stupid bureaucracy has got to stop. There has to be common sense in the program and this includes not only State projects but those sponsored by the federal government. I am sending a copy of this letter to the Honorable Paul Sarbanes. He has shown interest in our problems in the past by personal communication with me and, hopefully, he will look at this loophole in the federal law and block it.

JOSEPH F. SCHANNO MD  
Chestertown, MD



### Provider Fee Project: President's Response

Med Chi has received many inquiries regarding the Medical Assistance Program's new Provider Fee Project (PFP). On June 13, 1991, the Executive Committee met with Department of Health and Mental Hygiene (DHMH) Secretary Nelson Sabatini to voice your concerns directly.

Med Chi was assured by Mr. Sabatini that all efforts would be made to revise the billing forms so that there would be no confusion as to the accounting processes that your office uses to handle such claims and that your accountants use in calculating your tax returns.

Of equal importance are the issues regarding the legality and ethics of the program. Med Chi is prohibited from encouraging physicians to withdraw from such programs at the risk of anti-trust violations. Med Chi's obligation is to remind its membership that current Maryland law states that "physicians shall charge their customary fees to Medicaid patients." We are cognizant of the fact that there may be personal ethical issues that come to bear in your decisions. However, the current program is not in violation of the ethical policies of Med Chi.

Mr. Sabatini has agreed to go to any county medical society to discuss these issues personally. Should you have other questions regarding the PFP, please contact the Faculty directly by calling 1-800-492-1056 or 301-539-0872. The Executive Director, Angelo J. Troisi, or the Assistant Executive Director for Health Care Policy, Roseanne M. Matricciani, will be available to help you.

Once again, thank you for your input to Med Chi. Med Chi realizes that your concerns are for your patients' well-being and looks forward to helping you in this matter as well as any other matter that should arise.

J. DAVID NAGEL MD  
President, Medical and Chirurgical Faculty of Maryland

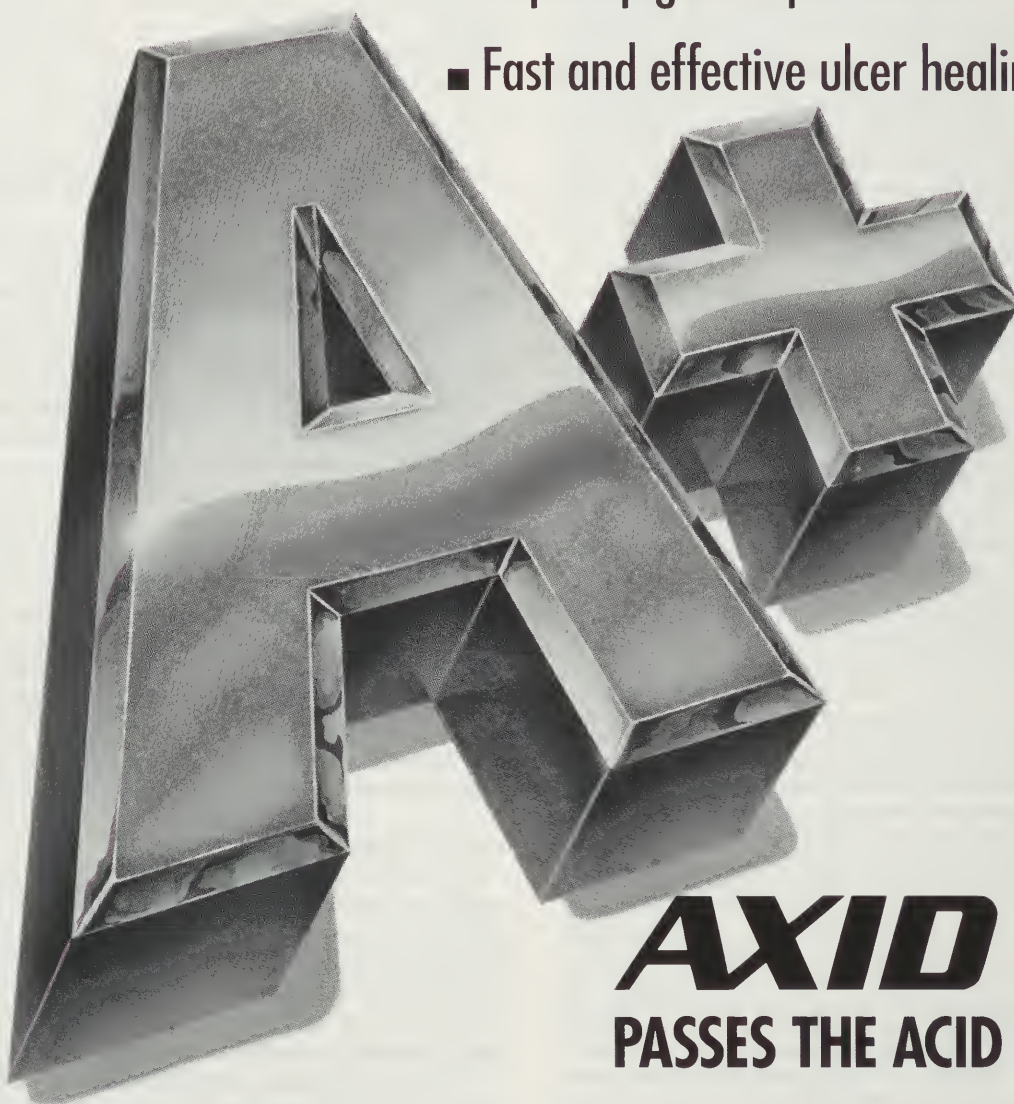


For excellent response in the treatment of  
duodenal ulcers...

**AXID**<sup>®</sup> nizatidine

has the right answers

- Rapid epigastric pain relief<sup>1,2\*</sup>
- Fast and effective ulcer healing<sup>2,3,4</sup>



**AXID**  
**PASSES THE ACID TEST**

\*Most patients experience pain relief with the first dose.  
See adjacent page for references and brief summary  
of prescribing information.



## AXID® (nizatidine capsules)

**Brief Summary. Consult the package insert for complete prescribing information.**  
**Indications and Usage:** 1. *Active duodenal ulcer*—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

2. *Maintenance therapy*—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than 1 year are not known.

**Contraindications:** Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H<sub>2</sub>-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H<sub>2</sub>-receptor antagonists.

**Precautions:** *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency. 3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

**Laboratory Tests**—False-positive tests for urobilinogen with Multistix® may occur during therapy.

**Drug Interactions**—No interactions have been observed with theophylline, chloridiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 50 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C**—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers**—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use**—Safety and effectiveness in children have not been established.

**Use in Elderly Patients**—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,300 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic**—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular**—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS**—Rare cases of reversible mental confusion have been reported.

**Endocrine**—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic**—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumental**—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity**—As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other**—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

**Overdosage:** Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

## References

1. Data on file, Lilly Research Laboratories.
2. Scand J Gastroenterol. 1987;22(suppl 136):61-70.
3. Scand J Gastroenterol. 1987;22(suppl 136):47-55.
4. Am J Gastroenterol. 1989;84:769-774.

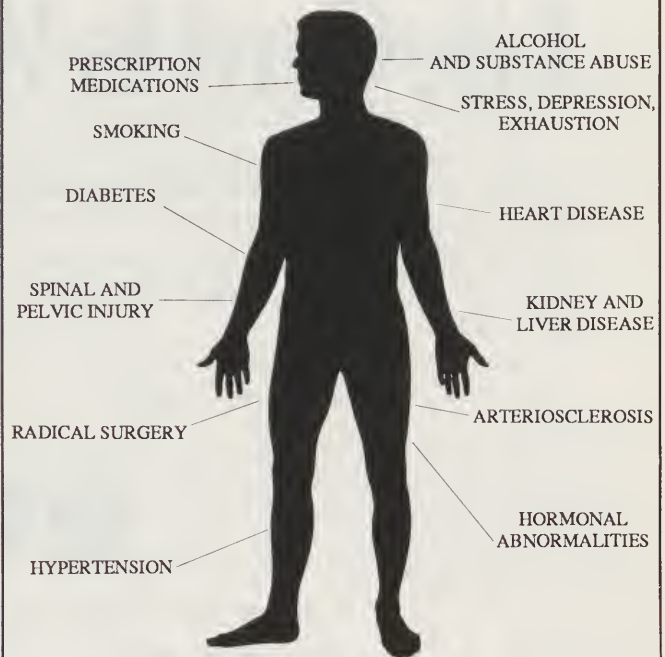
NZ-2943-B-149347

Additional information available to the profession on request.



**Eli Lilly and Company**  
Indianapolis, Indiana  
46285

# Impotence: Whatever The Cause...



## We Have The Treatment.

- Counseling
- Drug-Injection Therapy
- Mechanical Devices
- Medications
- Prosthesis
- Revascularization

Maryland's first health center dedicated solely to the comprehensive diagnosis and treatment of impotence. Physicians and patients now have an answer.



1104 Kenilworth Drive • Suite 406  
Baltimore, MD 21204

**1-301-296-MRIC**  
**1-800-955-MRIC**

# If Time Is Money, LifeCard Is Worth Millions.

LifeCard electronic claims processing verifies receipt of claims within 24 hours, reduces paperwork, accelerates payments, edits claims before they leave your office, and saves you money every time you file a claim.

Whether you are already using a computer or just getting started, LifeCard can

link your office to BCBS of Maryland, BCBS of the National Capital Area, Medicare B, Maryland Medicaid, and more than 21 major commercial insurance carriers.

Join the thousands of Maryland health care professionals who are saving time and money with paperless claims handling.



**Call your LifeCard representative today  
at 301-998-4490 or toll free at 1-800-227-3467.**



## **PHYSICAL THERAPY**

Specializing in treatment for pain of the neck and back.

- Prompt scheduling for your patients
- Narrative reports sent to each referring physician
- State-of-the-art facility, featuring isokinetic evaluation and exercise equipment
- Therapy provided as prescribed

We welcome the opportunity to serve your patients

### **PYRAMID HEALTH SERVICES, INC.**

Robert J. Varley, P.T.

1001 North Point Boulevard • Baltimore, MD • 301-282-9259



---

# Study of the Relationship Between Elevated Maternal Serum Alpha-fetoprotein and Adverse Pregnancy Outcome

---

Amy P. Roop BA, Joann A. Boughman PhD  
and Miriam G. Blitzer PhD

---

*From the Division of Human Genetics, University of Maryland at Baltimore, where Ms. Roop is a March of Dimes Summer Research Fellow; Dr. Boughman is Professor of Obstetrics and Gynecology; and Dr. Blitzer is Assistant Professor of Pediatrics and Director of the Alpha-fetoprotein Laboratory. Reprints: Dr. Blitzer, Division of Human Genetics, University of Maryland School of Medicine, 655 W. Baltimore St., Baltimore, MD 21201.*

---

*In a study of 1,703 pregnancies, adverse clinical outcomes associated with unexplained elevated maternal serum alpha-fetoprotein (MSAFP) included intrauterine growth retardation (IUGR), prematurity, IUGR and prematurity, prematurity without IUGR, spontaneous abortion, and stillbirth. These findings have significant implications for careful obstetrical management of patients with elevated MSAFP.*

---

Maternal serum alpha-fetoprotein (MSAFP) testing has emerged as an important screening tool to identify those pregnancies at increased risk for neural tube defects (NTDs) and other fetal abnormalities.<sup>1-4</sup> Alpha-fetoprotein (AFP) is a glycoprotein synthesized by the fetus and is observed in predictable concentrations in fetal serum, amniotic fluid, and maternal serum, depending on the gestational age. AFP gains access into the amniotic fluid through fetal urination and diffuses across fetal membranes into the maternal circulation where it can be quantitated from maternal serum samples.

Previous studies have indicated an increased incidence of adverse pregnancy outcomes among women with elevated levels of MSAFP in the absence of obvious fetal malformations. Prematurity, low birthweight, intrauterine growth retardation (IUGR), fetal death in utero (FDIU), neonatal death, and fetal congenital abnormalities were among those conditions significantly associated with pregnancies in which the second trimester MSAFP level was elevated.<sup>5-17</sup>

The present study evaluates a mid-Atlantic (Maryland and some surrounding geographic catchments) prenatal population to more precisely delineate the relationship between elevated levels of MSAFP and adverse pregnancy outcome. Black women have an increased risk for specific adverse pregnancy outcomes compared to non-blacks, but the reasons (biological/genetic or sociodemographic) have not been fully assessed.<sup>6</sup> Also, it appears that younger mothers are at an increased risk for adverse outcomes compared to women over nineteen years of age.<sup>18</sup> For these reasons, the target population is evaluated with regard to specific demographic factors.

## Sampling Procedure

Maternal serum samples obtained between fifteen and twenty weeks of gestation were analyzed for AFP levels by radioim-

munoassay (Clinical Assays, Cambridge, MA). Multiple of the median (MoM) values were calculated for each sample by dividing the individual assay result by normal median values for specific gestational ages (based on greater than one-hundred values from normal pregnancies at each gestational week) and then adjusted for maternal weight and the presence or absence of insulin-dependent diabetes. Values greater than 2.3 MoM were considered elevated. By identifying gestational age discrepancies or multiple pregnancies through ultrasonography, apparent significant elevations in MSAFP were corrected. Follow-up for a true elevation in MSAFP usually included a repeat MSAFP determination, and subsequent counseling and additional testing, including detailed ultrasound examination and amniocentesis if the result remained elevated.

### Methods

From June to November of 1989, pregnancy outcome data were collected on 1,703 women who participated in the AFP testing program at the University of Maryland in 1987 and 1988. Letters were mailed to more than one hundred referring physicians asking for information regarding infant sex, gestational age at birth, birthweight, and any obstetrical or neonatal complications. However, more than 70 percent of the follow-up data were obtained directly by accessing delivery records at major medical centers. A database was established to store all pertinent maternal and pregnancy information.

Chi-square analyses were performed to assess the relationship of adverse outcome with elevated MSAFP. To compensate for multiple comparisons, the present study used a p level of 1 percent ( $p < 0.01$ ) to determine statistical significance. The frequency of certain outcomes in women with normal MSAFP and in women with elevated MSAFP was also determined. Relative risk values were calculated by dividing the frequency of an outcome in the elevated MSAFP group by its frequency in the normal MSAFP group. The resulting value represented the increased likelihood of a certain outcome given an elevated MSAFP level.

All patients were classified according to race and age, and the data analyzed with regard to race and age to address possible demographic factors that might influence the frequency of adverse outcomes. In each case, the distribution of adverse outcomes was evaluated to determine if there was increased frequency of certain adverse outcomes in blacks compared with non-blacks or in adolescent women compared with women older than nineteen. It was then possible to investigate the specific subgroups (blacks and adolescents) and assess the relationship between elevated MSAFP and certain pregnancy outcomes in these two groups.

### Results

*Statistical Analyses.* Approximately 5,000 patients were screened for MSAFP levels at the University of

Maryland in 1987-1988. Available pregnancy outcome information was analyzed in 1,703 patients whose midtrimester serum AFP levels were obtained. Excluded from this population were individuals who were lost to follow-up, and patients for whom serum samples were drawn too early or too late to be effectively interpreted. Of the total group, there were 245 patients (4.9 percent) with an initial elevated MSAFP test. Forty-four (18 percent) of these elevated MSAFP values were considered not elevated after correction for gestational age discrepancies and multiple gestations. Of the remaining 201 patients with elevated AFP levels, pregnancy outcome was obtained on 151 or approximately 75 percent. General statistics on the data set, including AFP level, race, and age, are provided in Table 1. Of the 1,703 patients, 1,382 had normal MSAFP values, 151 had an initial elevation, and 170 had low values (a patient-specific risk for a Down syndrome fetus of  $\geq 1/270$ , calculated using the patient's AFP value and age-specific risk). There were 798 black patients, 664 white patients, 27 patients were of another race, and for 214 patients, no race was given. Of the patients in the follow-up group, 54.6 percent were black. Although the mean age of the total population was 27.7, there was a high percentage of adolescent mothers aged thirteen to nineteen (16.7 percent).

The outcomes of the 1,703 pregnancies are described in Table 2. A normal outcome is defined as a pregnancy in which no adverse outcome(s) occurred. Conditions defining adverse outcomes are listed in Table 2. The frequency of total adverse outcome was calculated from pregnancies with one or more adverse outcome(s). Since more than one of the outcomes can occur in any given patient, the columns are not additive.

The distributions of specific outcomes are outlined in Table 3. IUGR and prematurity, two of the parameters analyzed in this study, were grouped in several categories to delineate specific relationships between these outcomes and elevated MSAFP levels. First,

**Table 1. General Description of the 1,703 Patients from whom Pregnancy Outcome was Obtained**

Category	% of Total Follow-Up	
	N	%
AFP Level		
Normal	1,382	81.2
Elevated	151	8.9
Low	170	10.0
Ethnicity		
Black	798	46.9
White	664	39.0
Other	27	1.6
Not Given	214	12.6
Age		
Mean	27.67	
Range	13-45	
Standard Deviation	7.15	
Age 13-19	282	16.6
Age 20-30	769	45.2
Age >30	646	37.9
Age not given	6	0.3

AFP = alpha-fetoprotein



IUGR or prematurity or both of these outcomes were combined (this category was labeled prematurity and/or IUGR). Secondly, all cases of IUGR, prematurity or full-term, were evaluated. Next, all cases of prematurity, with or without IUGR, were evaluated. Lastly, prematurity without IUGR was analyzed as a distinct outcome. As expected, all cases of spina bifida, gastroschisis, and omphalocele were associated with elevated MSAFP. Significant outcomes ( $p < 0.01$ ) associated with unexplained elevated MSAFP included IUGR, prematurity (in both groups), IUGR and/or prematurity, prematurity without IUGR, spontaneous abortion, and FDIU/stillbirth. Congenital abnormalities, other than NTDs and open ventral wall defects, and neonatal death, as well as some minor outcomes, were not significantly associated with elevated MSAFP.

The frequencies of specific outcomes at increasing MSAFP levels are listed in Table 4. An obvious increase in the proportion of total adverse outcomes was correlated with the MSAFP level. Although this trend was not observed for each separate outcome, the size of some groups is small.

*Evaluation of Demographic Factors.* The distribution of adverse pregnancy outcomes by race and age is shown in Table 5. The frequency of IUGR, prematurity, IUGR and/or prematurity, prematurity without IUGR, spontaneous abortion, and FDIU/stillbirth was calculated in blacks versus whites and in adolescent mothers versus mothers older than nineteen years. A significant increase ( $p < 0.01$ ) in IUGR, extreme prematurity, prematurity, and prematurity without IUGR was observed for black women as com-

**Table 2. Pregnancy Outcomes in the 1,703 Patients Studied**

Category	% of Total Follow-Up	
	N	%
Total Normal Outcome*	1,002	58.8
Total Adverse Outcome**	701	41.2
<b>General Outcomes</b>		
Normal Male	831	48.8
Normal Female	765	44.9
Normal Infant, Sex Not Given	21	1.2
Multiple Birth	17	1.0
<b>Adverse Outcomes</b>		
IUGR	55	3.2
Prematurity (< 36 wks)	167	9.8
Prematurity (32-36 wks)	129	7.6
Prematurity (< 32 wks)	38	2.2
IUGR and/or Prematurity	199	11.7
Prematurity without IUGR	144	8.5
Spontaneous Abortion	18	1.1
FDIU/Stillbirth	27	1.6
Congenital Abnormalities	15	0.9
Neonatal Death	7	0.4
Spina Bifida	3	0.2
Gastroschisis	4	0.2
Omphalocele	1	0.1
Sex Chromosome Aneuploidy	1	0.1
Down Syndrome	8	0.5
Other Autosomal Aneuploidy	2	0.1
Complicated Delivery	115	6.8
Cesarean Section	355	20.8
PROM	83	4.9
Fetal Distress	72	4.2

\*A pregnancy in which none of the above adverse outcomes occurred.

\*\*Pregnancies in which one or more adverse outcome(s) occurred.

IUGR = Intrauterine growth retardation;

FDIU = Fetal death in utero;

PROM = Premature rupture of the membranes

**Table 3. Distribution of Adverse Pregnancy Outcomes in Women with Elevated and Normal MSAFP\***

Category	Outcomes in Patients with Normal MSAFP		Outcomes in Patients with Elevated MSAFP		Relative Risk	Chi Square p Value
Total Distribution	1,382		151			
	N	%	N	%		
Total Normal Outcome	828	59.9	61	40.4	--	--
Significant Outcomes						
Total Adverse Outcomes	554	40.1	90	59.6	1.49	p < 0.01
IUGR	35	2.5	15	9.9	3.96	p < 0.01
Prematurity (<36 weeks)	119	8.6	36	23.8	2.77	p < 0.01
Prematurity (32-36 weeks)	91	6.6	29	19.2	2.91	p < 0.01
Prematurity (<32 weeks)	28	2.0	7	4.6	2.3	p < 0.01
IUGR and/or Prematurity	142	10.3	42	27.8	2.7	p < 0.01
Prematurity without IUGR	104	7.5	27	17.9	2.39	p < 0.01
Spontaneous Abortion	11	0.8	5	3.3	4.13	p < 0.01
FDIU/Stillbirth	16	1.2	9	6.0	5	p < 0.01
Spina Bifida	0	0	3	2.0	N/A	p < 0.01
Gastroschisis	0	0	4	2.6	N/A	p < 0.01
Omphalocele	0	0	1	0.7	N/A	p < 0.01
Non-Significant Outcomes						
Congenital Abnormalities	13	0.9	2	1.3	1.4	NS
Neonatal Death	6	0.4	1	0.7	1.75	NS
Complicated Delivery	99	7.2	8	5.3	0.73	NS
Cesarean Section	281	20.3	33	21.9	1.08	NS
PROM	67	4.8	10	6.6	1.38	NS
Fetal Distress	56	4.1	8	5.3	1.29	NS

\* Chromosomal disorders were not analyzed since there was no occurrence in women with elevated MSAFP.

MSAFP = Maternal serum alpha-fetoprotein IUGR = Intrauterine growth retardation FDIU = Fetal death in utero

PROM = Premature rupture of the membranes

pared with white women. Prematurity without IUGR was the only outcome significantly increased in mothers age thirteen to nineteen. In both black women and younger women, an increased relative risk was observed for most of these outcomes.

The next analysis tested whether black women and young women with elevated MSAFP values had a significant increase in the incidence of given pregnancy outcomes compared to women in one of these subgroups with normal MSAFP. The distribution of adverse pregnancy outcomes in black women and in

women age thirteen to nineteen years with elevated and normal MSAFP is shown in Table 6. Of the significantly increased outcomes in black compared with white women, IUGR and IUGR with prematurity were still significantly increased in black women with elevated MSAFP. However, extreme prematurity, prematurity, and prematurity without IUGR were not significantly increased in black women with elevated MSAFP. Prematurity (< thirty-two weeks) was not significantly increased in black women as a whole or in black women with elevated MSAFP. Although spontaneous abortion and FDIU/stillbirth were not outcomes seen more frequently in black women, both were significantly increased in black women with elevated MSAFP. Prematurity without IUGR was still significantly increased ( $p < 0.01$ ) in thirteen to nineteen year olds with elevated MSAFP. Although not significant in thirteen to nineteen year olds, FDIU/stillbirth was significantly elevated in thirteen to nineteen year olds with elevated MSAFP.

## Discussion

The purpose of this study was to assess the relationship between elevated MSAFP and adverse pregnancy outcome from the patient population analyzed at the University of Maryland AFP laboratory. Comparisons with other studies must be interpreted with caution as results are dependent on the distribution of data available from follow-up which may not be representative of the general population. In support of previous findings, the distribution of certain adverse pregnancy outcomes, including IUGR, prematurity, prematurity and/or IUGR, prematurity without IUGR, spon-

**Table 4. Distribution of Adverse Outcomes According to MSAFP Level**

Category	MSAFP Level (MoM)			
	2.3 to 4.9		≥5.0	
Total Distribution	130		21	
	N	%	N	%
Total Normal Outcome	59	45.4	2	9.5
Total Adverse Outcome	71	54.6	19	90.5
IUGR	13	10.0	2	9.5
Prematurity (< 36 wks)	32	24.6	4	19.0
Prematurity (32-36 wks)	25	19.2	4	19.0
Prematurity (< 32 wks)	7	5.4	0	0
IUGR and/or Prematurity	37	28.5	5	23.8
Prematurity without IUGR	24	18.5	3	14.3
Spontaneous Abortion	4	3.0	1	4.8
FDIU/Stillbirth	4	3.0	5	23.8
Spina Bifida	0	0	3	14.3
Gastroschisis	0	0	4	19.0
Omphalocele	0	0	1	4.8
Congenital Abnormalities	1	0.8	1	4.8
Neonatal Death	1	0.8	0	0

MSAFP = Maternal serum alpha-fetoprotein;

IUGR = Intrauterine growth retardation;

FDIU = Fetal death in utero

**Table 5. Distribution of Adverse Outcomes According to Specific Subgroups\***

Category	Black Patients		White Patients		Relative Risk	Chi Square p Value
	N	%	N	%		
Total Distribution	753		581		--	--
Total Normal Outcome	415	55.1	359	61.8	--	--
Total Adverse Outcomes	338	44.9	222	38.2	1.18	NS
IUGR	34	4.5	12	2.1	2.14	$p < 0.01$
Prematurity (<36 weeks)	103	13.7	37	6.4	2.14	$p < 0.01$
Prematurity (32-36 weeks)	80	10.6	30	5.2	2.04	$p < 0.01$
Prematurity (<32 weeks)	23	3.1	7	1.2	2.58	NS
IUGR and/or Prematurity	125	16.6	43	7.4	2.24	$p < 0.01$
Prematurity without IUGR	88	11.7	31	5.3	2.21	$p < 0.01$
Spontaneous Abortion	11	1.5	5	0.9	1.67	NS
FDIU/Stillbirth	17	2.3	8	1.4	1.64	NS
Category	Patients 13 -19 years		Patients >19 years		Relative Risk	Chi Square p Value
	N	%	N	%		
Total Distribution	272		1,255		--	--
Total Normal Outcome	143	52.6	743	59.2	--	--
Total Adverse Outcomes	129	47.4	512	40.8	1.16	NS
IUGR	8	2.9	42	3.3	0.879	NS
Prematurity (<36 weeks)	38	14.0	117	9.3	1.51	NS
Prematurity (32-36 weeks)	28	10.3	92	7.3	1.41	NS
Prematurity (<32 weeks)	10	3.7	25	2.0	1.85	NS
IUGR and/or Prematurity	41	15.1	142	11.3	1.34	NS
Prematurity without IUGR	39	14.3	99	7.9	1.81	$p < 0.01$
Spontaneous Abortion	6	2.2	10	0.8	2.75	NS
FDIU/Stillbirth	4	1.5	21	1.7	0.882	NS

\* The women in the follow-up group with low MSAFP were excluded.

MSAFP = Maternal serum alpha-fetoprotein IUGR = Intrauterine growth retardation FDIU = Fetal death in utero



taneous abortion, and FDIU/stillbirth was increased in women with elevated MSAFP when compared to women with normal MSAFP. All cases of NTDs and ventral wall defects were associated with elevated MSAFP. As in previous studies, minor adverse outcomes (complicated delivery, cesarean section, premature rupture of the membranes (PROM), and fetal distress) were not significantly increased in women with elevated MSAFP.

Low birthweight occurred in 27.8 percent of women with elevated MSAFP and in 10.3 percent of women with normal MSAFP, yielding a relative risk of 2.39 and a significant p value. These frequencies are somewhat increased over those reported by other researchers.<sup>5,6,11,14,17,19</sup> Several explanations are plausible. Differences in ascertainment of low birthweight in previous reports cause confusion when attempting to compare studies. In the present study, the analyses performed in the IUGR category more closely correlate with previous findings (a 9.9 percent incidence in women with elevated MSAFP as compared with a 2.5 percent incidence in women with normal MSAFP to yield a relative risk of 3.96). Also, other demographic factors described below may influence the higher incidence of certain outcomes in the follow-up group. The fact that all combinations of prematurity and IUGR were significantly increased in women with elevated MSAFP suggests that both IUGR and prematurity cause the increased incidence of low birthweight in infants of women with elevated MSAFP.

FDIU occurred in 6.0 percent of patients with

elevated MSAFP compared with the 4.0 percent, 7.0 percent, and 9.5 percent previously reported.<sup>7,17</sup> A 1.2 percent incidence of this outcome in women with normal MSAFP compared closely with the 0.5 percent reported by Burton.<sup>17</sup> FDIU in patients with elevated MSAFP was five times as likely to occur than in patients with normal MSAFP<sup>20</sup> (a calculated relative risk of 8).

Two outcomes previously associated with elevated MSAFP (congenital abnormalities and neonatal death) were not found to occur in a significantly higher incidence in women with elevated MSAFP in the present study, conceivably due to a small sample. Compared with Milunsky et al,<sup>20</sup> relative risks were low for congenital abnormalities (1.40) and neonatal death (1.75).

The distribution of adverse outcomes in patients with persistently elevated MSAFP was evaluated to determine if there was an increased incidence of adverse outcome in this group as compared with women with subsequent normal screens. Although adverse outcomes are not significantly increased in this population, all show a definite trend toward significance, with relative risks up to 2.07 for IUGR. Of the patients with elevated MSAFP, 51.7 percent had normal pregnancy outcomes while 32.7 percent of the women with persistent elevations in MSAFP had normal outcomes. Brock et al<sup>7</sup> calculated these incidences to be 87 percent and 54 percent, respectively. In this section of the study, 67.3 percent of women with persistent elevations in MSAFP had adverse outcomes compared with 48.3 percent in the normal population. The incidence of normal pregnancy outcomes in both groups would in-

**Table 6. Distribution of Adverse Pregnancy Outcomes in Women with Elevated and Normal MSAFP According to Subgroup**

Category	Outcomes in Patients with Normal MSAFP		Outcomes in Patients with Elevated MSAFP		Relative Risk	Chi Square p Value
	N	%	N	%		
<b>Black</b>						
Total Distribution	680		73		--	--
Total Normal Outcome	384	56.5	31	42.5	--	--
Total Adverse Outcomes	296	43.5	42	57.5	1.32	NS
IUGR	24	3.5	10	13.7	3.91	p < 0.01
Prematurity (<36 weeks)	87	12.8	16	21.9	1.71	NS
Prematurity (32-36 weeks)	67	9.9	13	17.8	1.8	NS
Prematurity (<32 weeks)	20	2.9	3	4.1	1.41	NS
IUGR and/or Prematurity	105	15.4	20	27.4	1.78	p < 0.01
Prematurity without IUGR	78	11.5	10	13.7	1.19	NS
Spontaneous Abortion	7	1.0	4	5.5	5.5	p < 0.01
FDIU/Stillbirth	11	1.6	6	8.2	5.13	p < 0.01
<b>Patients 13 -19 years</b>						
Total Distribution	249		23		--	--
Total Normal Outcome	133	53.4	10	43.5	--	--
Total Adverse Outcomes	116	46.6	13	56.5	1.21	NS
IUGR	6	2.4	2	8.7	3.63	NS
Prematurity (<36 weeks)	33	1.3	5	2.2	1.69	NS
Prematurity (32-36 weeks)	25	10.0	3	13.0	1.3	NS
Prematurity (<32 weeks)	8	3.2	2	8.7	2.72	NS
IUGR and/or Prematurity	36	14.5	6	26.1	1.8	NS
Prematurity without IUGR	28	11.2	11	47.8	4.27	p < 0.01
Spontaneous Abortion	5	2.0	1	4.3	2.15	NS
FDIU/Stillbirth	2	0.8	2	8.7	10.88	p < 0.01

MSAFP = Maternal serum alpha-fetoprotein IUGR = Intrauterine growth retardation FDIU = Fetal death in utero

crease if minor adverse outcomes were not included. Small sample size for this analysis could account for the fact that these results are not significant.

Previous studies have indicated an increase in adverse outcomes at increasing MSAFP levels. In the present study, total adverse outcome was increased from 53.4 percent at 2.3 to 2.99 MoM, to 56.1 percent at 3.0 to 4.99 MoM, to 90.5 percent at greater than 5.0 MoM. The only individual outcome which clearly increased with increasing MSAFP levels was FDIU (1.4 percent to 5.3 percent to 23.8 percent). Other than FDIU, there was no pattern in the incidence of adverse pregnancy outcomes at increasing MSAFP concentrations. This lack of obvious increase in adverse outcomes can be explained by small sample size. For example, there happened to be no congenital abnormalities at 3.0 to 4.99 MoM. However, there was an increase from 1.4 percent at the lower MSAFP level to 4.8 percent at the higher MSAFP level.

One explanation for the correlation between elevated MSAFP and adverse pregnancy outcome focuses on placental changes which have been postulated to account for elevations in MSAFP in pregnancies with no obvious fetal malformations and in pregnancies where the amniotic fluid AFP level is normal.<sup>21</sup> Both elevated MSAFP and adverse outcomes may have a common placental origin.<sup>14,15</sup>

In both blacks and young women, the relative risk for each outcome was increased in women with elevated MSAFP compared with women with normal MSAFP. With certain outcomes which were still significant in the black and/or adolescent group, it was evident that the underlying reason for these outcomes was the fact that the mother had elevated MSAFP. In other instances, the underlying reason for an increase in a given outcome within a subgroup was not clear because the outcome was not statistically significant when looking at women with elevated versus normal MSAFP. Thus, there must be other factors which account for the increase in high-risk pregnancies in blacks and young women. Socioeconomic status, poor health, or poor prenatal care might be factors that could account for this increase, as it has not been shown that there is a biological/genetic reason for this increase in adverse pregnancy outcomes.

The obstetrical management of patients with unexplained MSAFP elevations is controversial. However, the findings of this study may have further implications for careful obstetrical management and fetal monitoring of patients with elevated MSAFP. In the future, placental studies may provide more useful information regarding the relationship between placental abnormality and elevated MSAFP. The treatment, counseling, and management of women with unexplained elevations in MSAFP depends on future studies in this area. Obtaining follow-up pregnancy data is imperative to complete studies of this kind and requires close cooperation between referring physicians and the laboratory.

## References

1. Wald NJ and Cuckle HS. Maternal serum alpha-fetoprotein measurement in antenatal screening for anencephaly and spina bifida in early pregnancy: United Kingdom Collaborative Study on Alpha-fetoprotein in Relation to Neural Tube Defects. *Lancet* 1977; i:1323-32.
2. Macri JN and Weiss RR. Prenatal serum alpha-fetoprotein screening for neural tube defects. *Obstet Gynecol* 1982; 59:633-9.
3. Burton BK, Sowers SG and Nelson LH. Maternal serum alpha-fetoprotein screening in North Carolina: Experience with more than twelve thousand pregnancies. *Am J Obstet Gynecol* 1983; 146:439-44.
4. Haddow JE, Kloza EM, Smith DE and Knight GJ. Data from an alpha-fetoprotein pilot screening program in Maine. *Obstet Gynecol* 1983; 62:556-60.
5. Brock DJH, Barron L, Jelen P, Watt M and Scrimgeour JB. Maternal serum alpha-protein measurements as an early indicator of low birthweight. *Lancet* 1977; ii:267-8.
6. Creasy RK. Preterm labor and delivery. In: Creasy RK and Resnik R, eds. *Maternal Fetal Medicine: Principles and Practice*. Second edition. Philadelphia: W.B. Saunders Co. 1989; 477-9.
7. Brock DJH, Barron L and Duncan P. Significance of elevated mid-trimester maternal plasma alpha-fetoprotein values. *Lancet* 1979; i:1281-82.
8. Brock DJH, Barron L and Raab GM. The potential of mid-trimester maternal plasma alpha-fetoprotein measurement in predicting infants of low birthweight. *Obstet Gynecol* 1980; 87:582-5.
9. Smith ML. Raised maternal serum alpha-fetoprotein levels and low birthweight babies. *Br J Obstet Gynaecol* 1980; 87:1099-1102.
10. Wald NJ, Cuckle HS and Boreham J. Maternal serum alpha-fetoprotein and birthweight. *Br J Obstet Gynaecol* 1977; 87:1323-32.
11. Brock DJH, Barron L, Watt M, Scrimgeour JB and Keay AJ. Maternal plasma alpha-fetoprotein and low birthweight: A prospective study throughout pregnancy. *Br J Obstet Gynaecol* 1982; 89:348-51.
12. Purdea DW, Young JL, Guthrie KA and Picton CD. Fetal growth achievement and elevated maternal serum alpha-fetoprotein. *Br J Obstet Gynaecol* 1983; 90:433-6.
13. Buckland CM, Thom H and Campbell AGM. Maternal serum alpha-fetoprotein levels in low birthweight singleton pregnancies. *J Perinat Med* 1984; 12:127-32.
14. Hamilton MPR, Abdalla HI and Whitfield CR. Significance of raised maternal serum alpha-fetoprotein in singleton pregnancies with normally formed fetuses. *Obstet Gynecol* 1985; 65:465-70.
15. Burton BK and Dillard RG. Outcome in infants born to mothers with unexplained elevations of maternal serum alpha-fetoprotein. *Pediatrics* 1986; 77:582-6.
16. Bremme K, Eneroth P, Nilsson B, Marsk L and Hagenfeldt L. Outcome of pregnancy in relation to maternal serum alpha-fetoprotein levels in the second trimester: An evaluation of a screening program and a longitudinal follow-up. *Gynecol Obstet Invest* 1988; 26:191-205.
17. Burton BK. Outcome of pregnancy in patients with unexplained elevated or low levels of maternal serum alpha-fetoprotein. *Obstet Gynecol* 1988; 72:709-13.
18. Abrams B. Environmental influences on fetal development. In: Creasy RK and Resnik R, eds. *Maternal-Fetal Medicine: Principles and Practice*, Second edition. Philadelphia: W.B. Saunders Co. 1989; 178.
19. Wald N, Cuckle H, Stirrat GM, Bennett MJ and Turnbull AC. Maternal serum alpha-fetoprotein and low birthweight. *Lancet* 1977; ii:268-70.
20. Milunsky A, Jick SS, Bruell CL, MacLaughlin DS, Tsung YK, Jick H, Rothman KH and Willett W. Predictive values, relative risks, and overall benefits of high and low maternal serum alpha-fetoprotein screening in singleton pregnancies: New epidemiologic data. *Am J Obstet Gynecol* 1989; 161:291-7.
21. Salafia CM, Silberman L, Herrera NE and Mahoney MJ. Placental pathology at term associated with elevated midtrimester maternal serum alpha-fetoprotein concentration. *Am J Obstet Gynecol* 1988; 158:1064-66.



# YOCON<sup>®</sup>

## YOHIMBINE HCl

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon<sup>®</sup> is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral alpha-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

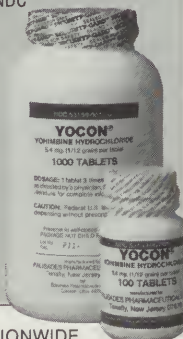
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon<sup>®</sup> 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

#### References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



AVAILABLE AT PHARMACIES NATIONWIDE

**PALISADES  
PHARMACEUTICALS, INC.**

219 County Road  
Tenafly, New Jersey 07670  
(201) 569-8502  
1-800-237-9083

## Maryland Metabolic Institute Announces Their New Location and Continuation of Services

**A new strategy to improve patient care**

*We help the physician  
by helping the patient  
help themselves*

**H**ealth can be maintained by teaching patients good care habits. Especially for those with needs related to:

- diabetes including gestational diabetes
- weight reduction and maintenance
- dietary problems of all types
- stress management

Now the time consuming burden of patient training can be transferred from a busy practice to a competent health care team. A certified nurse educator, master trained dietitians and behavior counselors will return the patient well educated to their primary care physician.

Training Programs Include:

#### Diabetes Education

- 20-hour courses, children and adults
- glucose monitoring
- ambulatory insulin instruction
- diabetes and pregnancy
- gestational diabetes

#### Behavior Modification

- weight reduction and maintenance
- modified fasting; Optifast
- limited diets; Optitrim
- full food control; LEARN<sup>®</sup>
- stress management

#### Dietary Counseling

- all medical disorders

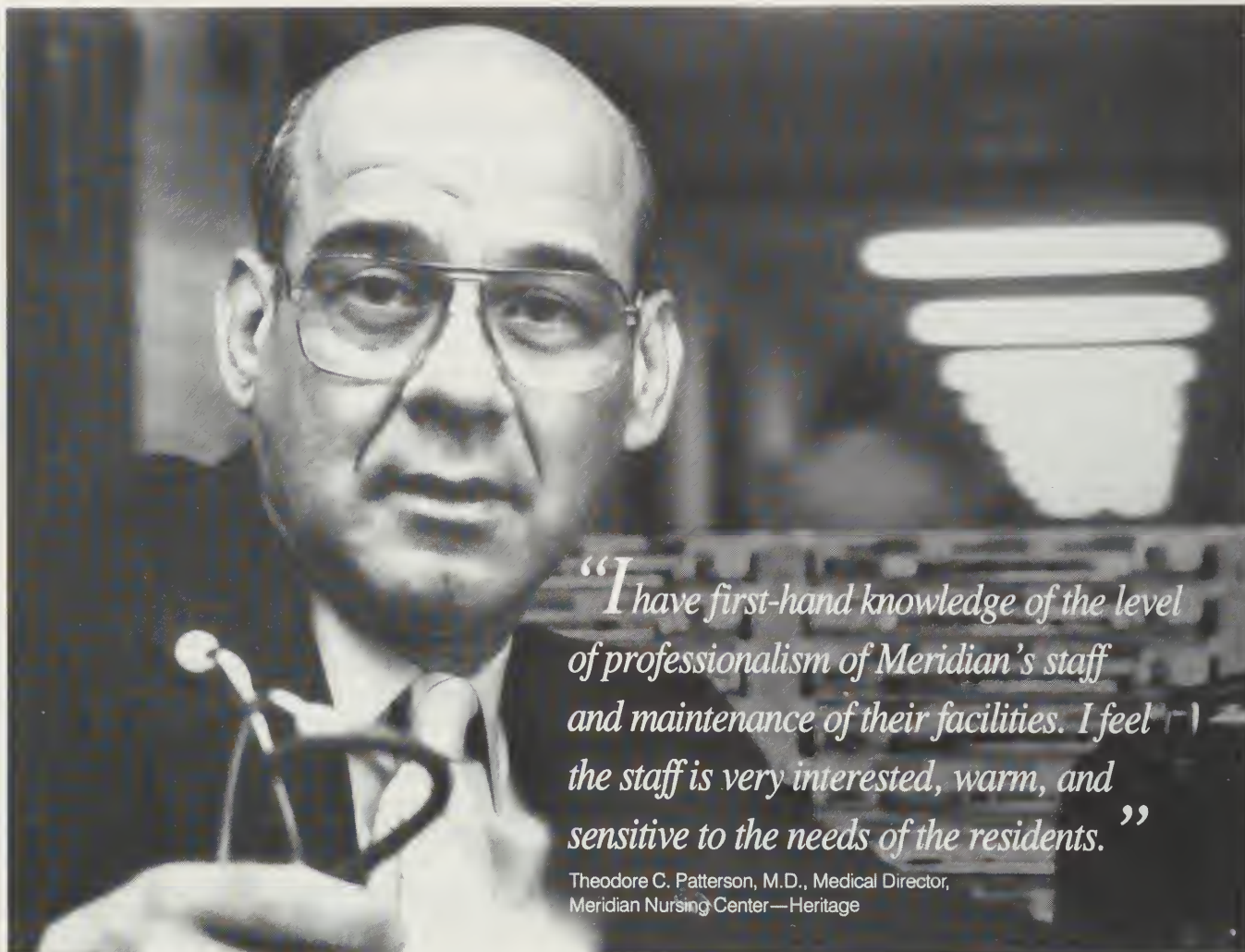
Call for an appointment or further information or have patients schedule a consultation.

**MMI Diabetes Center\* (301) 296-0025**  
**MMI Optifast<sup>®</sup> Weight Reduction and  
Maintenance Program\*\* (301) 494-8338**

\*formerly International Diabetes Center of Maryland

\*\*affiliated with GBMC Agency, Inc.

New location:  
Between Kenilworth and York Road at 695, Exit 26S  
110 West Road, Suite 210  
Towson, Maryland 21204  
Thaddeus E. Prouit, M.D. FACP



*“I have first-hand knowledge of the level of professionalism of Meridian’s staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents.”*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer’s patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there’s our full-time activity directors, social workers, and dietitians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





---

# Inflammatory Pseudotumor of the Retroperitoneum

---

Santa J. Johnston MD, Bonnie L. Beaver MD, Chin-Chih J. Sun MD,  
Ruth E. Luddy MD and Allen D. Schwartz MD

---

*From the University of Maryland Hospital where Dr. Johnston, at the time of this study, was a Resident in Pediatrics; Dr. Beaver is a Pediatric Surgeon; Dr. Sun is a Pathologist; and Dr. Luddy is a Pediatric Hematologist-Oncologist. Dr. Schwartz is Chairman, Department of Pediatrics, Sinai Hospital, Baltimore, MD. Reprints: Allen D. Schwartz MD, Dept. of Pediatrics, Sinai Hospital of Baltimore, Belvedere at Greenspring, Baltimore, MD 21215.*

---

*A child presenting with the findings of inflammatory disease was found to have a pseudotumor of the retroperitoneum. Following surgical removal, all signs of the systemic inflammatory process resolved.*

*These rare, benign tumors of unknown etiology must not only be differentiated from locally invasive malignant lesions, but may present with findings suggesting a chronic inflammatory disorder.*

---

An inflammatory pseudotumor, also known as a plasma cell tumor,<sup>1</sup> histiocytoma,<sup>2</sup> or xanthofibroma,<sup>3</sup> is a rare and often forgotten cause of a mass lesion in a child. It may also present with the signs and symptoms of a chronic inflammatory illness. Herein we report the case of a child with a pseudotumor of the retroperitoneum with extension into the spleen and posterior wall of the stomach. The major presenting findings suggested the child had a chronic inflammatory disorder. A review of the literature revealed only a few such cases reported in children.<sup>4-8</sup>

## Case Presentation

VD, a five-year-old white female, was seen by her pediatrician with an eight-week history of low grade, intermittent fevers as high as 102°F, early satiety, and a three-pound weight loss. There was no history of vomiting or change in bowel habits. The patient had a normal physical examination and was diagnosed as having a viral syndrome. Laboratory data from a community hospital revealed an elevated white blood count (WBC), erythrocyte sedimentation rate (ESR) and serum globulin level, as well as a mild, normocytic anemia. She was referred to the University of Maryland Hospital Division of Pediatric Hematology/Oncology for evaluation of her anemia. Her physical examination at the time of referral was again unremarkable. A complete blood count (CBC) revealed: hemoglobin (Hgb)=9.1 gm/dl, hematocrit (Hct)=27.6 percent, and mean corpuscular volume (MCV) of 72u<sup>3</sup>. The ESR was 31mm/hr, platelet count = 1,118,000/mm<sup>3</sup>, and WBC = 14,100/mm<sup>3</sup> with a normal differential count.

Because the child was felt to have an inflammatory process responsible for her symptoms and abnormal laboratory findings, she underwent abdominal ultrasonography and gallium scan in an effort to find the source of an occult infection. These studies revealed a left upper quadrant mass that picked up gallium. A

computed tomography (CT) scan and a magnetic resonance imaging (MRI) scan (Figure 1) delineated a 10 cm x 5 cm mass well-separated from the tail of the pancreas and kidney, as well as the spleen in the anterior plane. Radiographic studies did not delineate the mass from the posterior aspect of the fundus and body of the stomach. Despite the documentation of the presence of a large mass, it could not be appreciated on repeated physical examinations.

Laboratory studies, including extensive viral, bacterial and fungal cultures, as well as tumor markers (urinary vanillylmandelic (VMA) and homovanillic acid (HVA), carcinoembryonic antigen (CEA), and alpha-fetoprotein (AFP)), were all within normal limits. A bone marrow aspiration was unremarkable except for an increase in plasma cell numbers thought to be compatible with an inflammatory response.

The patient underwent exploratory laparotomy and excision of a retroperitoneal tumor attached to the greater curvature of the stomach and spleen. Removal of the lesion necessitated partial gastrectomy and splenorrhaphy. She had an uncomplicated postoperative course and was discharged from the hospital eight days after surgery.

The child has been followed with physical examinations, MRI, and gallium scans for over two years without tumor recurrence. Her fevers, and her elevated

ESR, white cell count, and immunoglobulin levels, as well as her anemia, have resolved.

### Pathology of the Tumor

The tumor, resected with a portion of the stomach, measured 8 x 8 x 7 cm. Its cut surface was gray-tan, and its consistency was rubbery firm. Microscopically, the tumor was composed of pleomorphic spindle cells arranged in whorls and bundles, and showed vascular proliferation and various degrees of infiltration by lymphocytes and plasma cells. The periphery of the tumor resembled granulation tissue where the spindle cells were more collagenized and the chronic inflammation and vascular proliferation were more prominent. The bulk of the tumor, however, was composed of plump spindle cells having moderate amounts of eosinophilic cytoplasm and elongated vesicular nuclei with prominent nucleoli. In some areas, the tumor was very cellular, but mitoses were rarely found. The tumor had infiltrated the external muscular layer of the stomach.

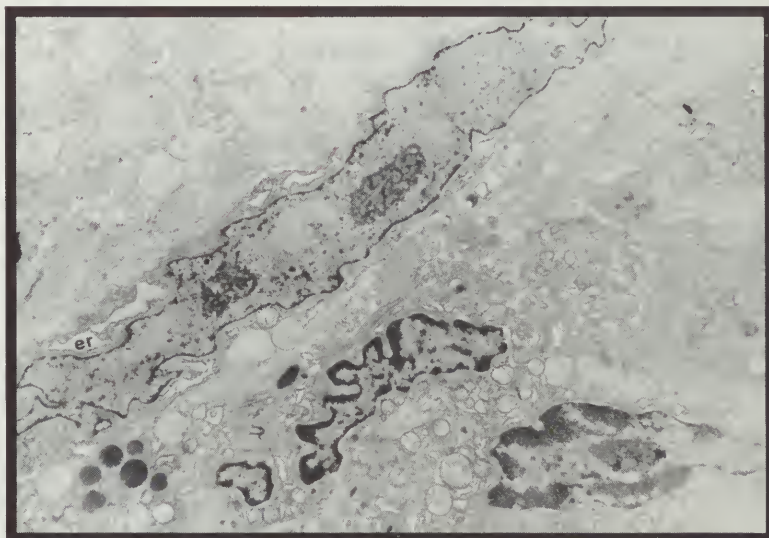
Electron microscopic examination showed two populations of spindle tumor cells, one fibroblastic and the other myofibroblastic. The fibroblasts were characterized by many parallel profiles of rough endoplasmic reticulum (Figure 2), and the myofibroblasts were fibroblasts containing bundles of actin microfilaments with interspersed dense bodies (Figure 3).

### Discussion

Inflammatory pseudotumors are an important group of benign lesions first described by Konjetzny in 1920,<sup>9</sup> and later by Vanek in 1949,<sup>10</sup> and Helwig and Ranier in 1953.<sup>11</sup> The multiple names used for these lesions have caused much confusion. They include plasma cell granuloma, mast cell tumor, fibroma, fibrous histiocytoma, postinflammatory tumor, and myofibroblastic tumor.<sup>12</sup> They are important because of the difficulty



**Figure 1.** MRI demonstrating the left upper quadrant tumor mass.



**Figure 2.** Electron microscopy of the tumor showing fibroblasts characterized by elongated nuclei and dilated rough endoplasmic reticula. (x10,000)



in differentiating them from malignant tumors prior to surgery.

Most literature on these tumors is devoted to those located in the respiratory system or orbit. The review article by Berardi et al<sup>12</sup> of 181 inflammatory pseudotumors of the lung described a patient population ranging from one through seventy-three years of age, with 8.1 percent of the patients between one and ten years of age. Scattered case reports of extrapulmonary pseudotumors indicate they have become increasingly recognized in the young patient.<sup>3,9,13-15</sup> They rarely involve the gastrointestinal tract of children.

Patients with abdominal disease usually present with a mass and a constellation of findings that may include fever, growth failure, changes in bowel habits, anemia, thrombocytosis, hyperglobulinemia, and an elevated erythrocyte sedimentation rate.<sup>6</sup> These findings are usually nonspecific and suggest a variety of disease processes, including periappendiceal abscess or inflammatory bowel disease.

In our case, the large mass could not be appreciated on physical examination by a number of experienced physicians, even after roentgenographic discovery. Ultrasound and CT scan usually reveal a nonhomogenous solid mass that may have calcifications. Surgical extirpation is necessary for definitive diagnosis.

Surgery often reveals a large, solid, non-encapsulated, well-circumscribed mass with a smooth glistening surface. It may be attached to an organ, arise from a vascular pedicle,<sup>13</sup> and sometimes infiltrate the structure of origin to a variable extent. Often it is densely adherent to surrounding organs as noted in our patient. The cut surface reveals a yellow-tan to grayish tumor with nodular fibrotic changes. There are localized proliferations of mononuclear inflammatory cells including plasma cells, lymphocytes, and eosinophils, as well as spindle-shaped mesenchymal cells of myofibroblasts.<sup>13,16</sup> A variety of other cells including

foamy histiocytes and mast cells may be present. Frequently, there are areas of myxomatous changes which have led to the subclassification of these tumors as follows:

1. *xanthogranuloma type* which have a predominantly histiocytic component;
2. *plasma cell granuloma type* which are predominantly plasma cell infiltrates; and
3. *sclerosing pseudotumors* which have mostly sclerotic features.

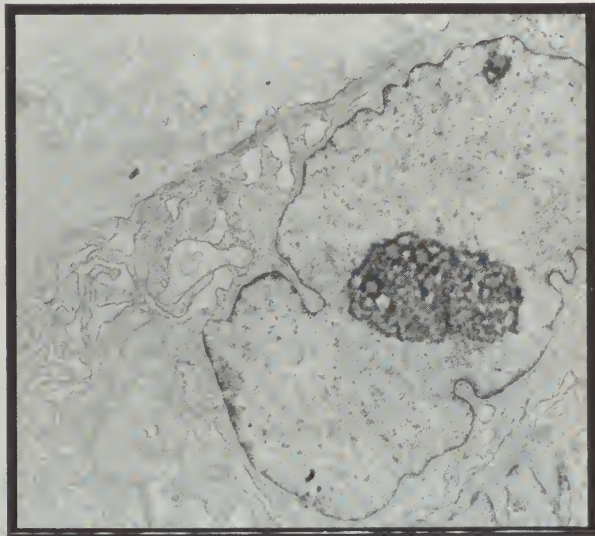
A single tumor may have varying amounts of all three subtypes and is named for its predominant histologic features. Pseudotumors must be differentiated from locally invasive well-differentiated fibrosarcomas, angiosarcomas, and hemangiopericytomas.<sup>8</sup> The vascular component of an inflammatory pseudotumor does not resemble the latter, but because of the large number of reactive cells, may be mistaken for an angiosarcoma.

The etiology of inflammatory pseudotumors is unknown. Some have proposed that they arise as the result of an inflammatory response following trauma, surgery, or infection. They have also been reported in association with gastric ulcer and gastric carcinoma in adults.<sup>14,17</sup> Although an infectious etiology has been postulated, bacteria, fungi, or viruses have not been cultured from these lesions.<sup>16</sup> Bahadori and Liebow have proposed that the pulmonary lesions are the result of an immunologically mediated response to an inhaled antigen.<sup>18</sup>

Treatment of choice for this tumor is surgical removal. Those reported to date have almost always been benign, but careful pathologic evaluation must be performed. In the past, the malignant appearance of these lesions has led to unnecessary radical surgery, radiation therapy, and chemotherapy. Follow-up evaluations are important because of the rare occurrence of malignant evolution that has been reported in plasma cell granulomas of the lung.<sup>19</sup> The prognosis for inflammatory pseudotumor is usually excellent and recurrence seldom occurs. Our patient has remained well for over three years following surgical removal.

## References

1. Cotton BH, Penido JRF. Plasma cell tumors of the lung. *Dis Chest* 1952; 21:218-21.
2. Dubilier LD, Bryant LR, Danielson GK. Histiocytoma (fibrous xanthoma) of the lung. *Am J Surg* 1968; 115:420-6.
3. Someren A. Report of a case in a child and review of the literature. *Am J Clin Pathol* 1978; 69(2):176-81.
4. Narasimharao KL, Malik AK, Mitra SK et al. Inflammatory pseudotumor of the appendix. *Am J Gastroenterol* 1984; 79(1):32-4.
5. Keen PE, Weitzner SE. Inflammatory pseudotumors of mesentery: A complication of ventriculoperitoneal shunt. *J of Neurosurg* 1973; 38:371-3.
6. Day DL, Sane S, Dehner LP. Inflammatory pseudotumor of the mesentery and small intestine. *Ped Radiol* 1986; 16:210-15.
7. Ramirez AB, Remine WH, Harrison EG. Inflammatory fibrous polyp (pseudotumor) of the ileum. *Postgrad Med* 1973; 54(1):107-15.
8. LiVols VA, Perzin KH. Inflammatory pseudotumors (inflam-



**Figure 3.** Myofibroblasts in the tumor showing bundles of thin filaments with interspersed dense bodies at the periphery of the cytoplasm. (x13,250)

matory fibrous polyps) of the small intestine: A clinical pathologic study. *Dig Dis* 1975; 20(4):325-36.

9. Samter TG, Alstott DF, Kurlander GJ. Inflammatory fibroid polyps of the gastrointestinal tract. A report of three cases, two occurring in children. *Am J Clin Pathol* 1966; 45:420-36.

10. Vanek J. Gastric submucosal granuloma with eosinophilic infiltration. *Am J Pathol* 1949; 25:397-411.

11. Helwig EG, Ranier A. Inflammatory fibroid polyps of the stomach. *Surg Gynecol Obstet* 1953; 96:355-67.

12. Berardi RS, Lee SS, Hammond PC, Stines GJ. Inflammatory pseudotumors of the lung. *Surg Gynecol Obstet* 1983; 156:89-96.

13. Scott L, Blair G, Taylor G et al. Inflammatory pseudotumors in children. *J Ped Surg* 1988; 23(8):755-8.

14. Wu JP, Yunis EJ, Fetterman G et al. Inflammatory pseudotumors of the abdomen: Plasma cell granulomas. *J Clin Pathol* 1973; 26:943-8.

15. Dehner LP. Extrapulmonary inflammatory myofibroblastic tumor: The inflammatory pseudotumor as another expression of the fibrohistiocytic complex. *Lab Invest* 1986; 54:15a.

16. Chan YF, Ma LT, Yeung CK, Lam KH. Parapharyngeal inflammatory pseudotumor presenting as fever of unknown origin in a 3-year-old-girl. *Pediatr Pathol* 1988; 8:195-203.

17. West SG, Pittman DL, Coggin JT. Intracranial plasma cell granuloma. *Cancer* 1980; 46:330-5.

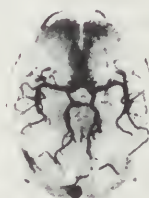
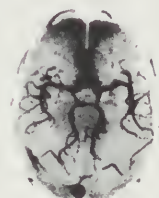
18. Bahadori M, Liebow AA. Plasma cell granulomas of the lung. *Cancer* 1973; 31:191-208.

19. Maier HC, Sommers SC. Recurrent and metastatic pulmonary fibrous histiocytoma/plasma cell granuloma in a child. *Cancer* 1987; 60:1073-76.

## A New Era of MRI Capability



### Three-Dimensional Magnetic Resonance



### Magnetic Resonance Angiography

- MRI/MRA technology not available anywhere else in the immediate area
- 1.0 tesla magnet manufactured by Siemens, a world leader in advancing MRI applications
- Convenient location, 1/2 mile east of I-95, on the campus of the Greater Laurel-Beltsville Hospital
- Board Certified Radiologists with training and experience in MRI.
- Next Day scheduling in most cases

Open Monday - Friday  
8:00 AM to 11:00 PM



7400 Van Dusen Road  
Laurel, Maryland 20707

(301) 725-8995

Turn it up. Turn it down.  
Let the music follow you around.  
Whole house stereo from Gramophone.

Phantom of The  
Opera in the  
kitchen

Mozart in the  
bedroom

Ronstadt in  
the den



Everyone can  
have their  
music where  
they want it.

Whether you're looking for a new CD player  
or a whole house stereo, Gramophone  
can bring your home to life with music.

**GRAMOPHONE**

Maryland's Finest Stereo and Video Stores

BALTIMORE • 821-5620 ∞ COLUMBIA • 465-5500



# The Johns Hopkins Hospital



## PHYSICAL THERAPY OCCUPATIONAL THERAPY PHYSIATRY CONSULTATION SERVICE

Providing Rehabilitation Services  
Including specialties in the areas of:

### SPINE REHABILITATION

- Spinal evaluation and treatment
- Back School Education
- Postoperative back evaluation and treatment

### ORTHOPEDICS

- Postoperative joint rehabilitation
- Rehabilitation of musculoskeletal injury
- Foot Orthotic evaluation/fabrication
- Prosthetic training
- TMJ

### PEDIATRICS

- Evaluation and treatment of premature infants through adolescents
- Cystic Fibrosis Pulmonary and Exercise Programs

### NEUROSCIENCES

- Chronic Pain Management
- Evaluation and treatment of neurological disorders
- Geriatric Fall Precautions Screening
- Multiple Sclerosis Patient Screening

### MEDICINE

- Geriatric Assessment
- Arthritis evaluation and treatment
- High Risk Pregnancy
- AIDS Rehabilitation

### SURGERY

- Amputee Rehabilitation
- Early postoperative intervention
- Postoperative organ transplantation rehabilitation

### ONCOLOGY

- Rehabilitation Post Bone Marrow Transplantation
- Leukemia Rehabilitation

### CARDIAC REHABILITATION

- Postoperative intervention
- Postoperative Heart, Lung and Heart/Lung Transplant Rehabilitation
- Phase 1 Cardiac MI program

### PSYCHIATRY

- Pediatrics through Geriatrics
- Inpatient, Day Hospital, Outpatient

### HANDS

- Static and Dynamic Orthotics
- Hand Surgery/Cumulative Trauma Rehabilitation

## THE JOHNS HOPKINS HOSPITAL

For more information on our inpatient and outpatient programs contact:

**The Rehabilitation Medicine Department**

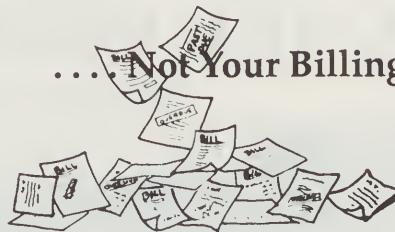
Osler 159  
600 North Wolfe Street  
Baltimore, Maryland 21205  
(301) 955-5693

# QUALITY

## THE HOPKINS TRADITION

## You Should Be Taking Care of Your Patients

....Not Your Billing



# PPBSI

Physician's Professional Billing Services, Inc.

## Leaders in technological billing since 1976

...

Will speed up your cash and cure ailing accounts.

...

- Professional management available to represent your office to Medicare, Blue Shield, Medical Assistance and other insurance carriers.
- Our service relieves your staff from processing self-pay statements.
- Self-pay bills with individualized messages at your prescribed intervals.
- Secondary commercial insurance claims are automatically rebilled.
- A multitude of statistical reports are available, including complete financial audit trails and management reports.

...

## Call today so we may treat you.

1•800•969•8382 / 1•301•825•5626

Locations in D.C. and Baltimore to serve you.

# PPBSI

Physician's Professional Billing Services, Inc.

7215 York Road, Baltimore, Maryland 21212  
or phone (301) 825-5626

Please fill out and return this coupon promptly for more  
information about the many benefits that  
Physician's Professional Billing Services, Inc. can offer you.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_

# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



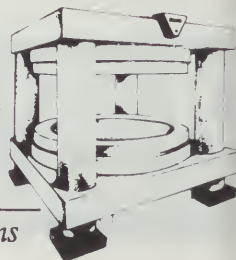
Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS<sup>TM</sup> MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



ACCESSIBLE MRI of  
BALTIMORE COUNTY, INC.

110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



---

# Preventive Therapy for Tuberculosis in Maryland

---

Evelyn Rabindran BA, Diane L. Matuszak MD, MPH,  
Ebenezer Israel MD, MPH, Helga Woodall CRNP, MA,  
Harriet Highsmith RN, BSN and James Flynn MD, MPH

---

*From the Maryland Department of Health and Mental Hygiene where Ms. Rabindran, at the time of the study, was a volunteer; Dr. Matuszak is Chief, Center for Community Epidemiology; Dr. Israel is Director, Epidemiology and Disease Control Program; Ms. Woodall is Chief of Tuberculosis Control; and Ms. Highsmith is a Nurse Consultant, Tuberculosis Control Division. Dr. Flynn is Director, Maryland Institute for Emergency Medical Services Systems.*

---

*Maryland data substantiate the safety of isoniazid therapy in preventing tuberculosis. To eradicate tuberculosis in the U.S., private physicians must play an active role by offering preventive therapy to patients at high risk of developing the disease.*

---

The main purpose of preventive therapy for tuberculosis is to prevent latent (asymptomatic) infection from progressing to clinical disease.<sup>1</sup> The advent of isoniazid (INH) brought the possibility of making tuberculosis a disease of the past. INH, a bactericidal drug, interferes with deoxyribonucleic acid (DNA) synthesis and intermediary metabolism of *Mycobacterium tuberculosis*, is relatively nontoxic, and is tolerated well by most patients.

Following the recognition of the increased risk of developing tuberculosis in the presence of human immunodeficiency virus (HIV) infection, the use of preventive therapy is more critical than ever. New York City, Florida, and Connecticut have reported increases in tuberculosis rates, especially in young adults, attributable to HIV infections.<sup>2,4</sup> The Advisory Committee for Elimination of Tuberculosis (ACET) recommends that health care providers test all persons with HIV infection and provide preventive therapy for those with a purified protein derivative (PPD) reaction size of 5 mm or greater.<sup>5</sup> In addition, ACET issued a consensus statement describing a plan to eradicate tuberculosis, mainly through aggressive screening, preventive therapy, and appropriate treatment regimens; the statement also highlighted the need for prevention efforts by private physicians.<sup>6</sup>

Historically, physicians have been reluctant to prescribe preventive therapy for fear of adverse reactions to INH.<sup>7</sup> Studies carried out worldwide have reassured private and public providers regarding the safety and cost effectiveness of INH preventive therapy.<sup>5</sup> Information collected in Maryland was analyzed to evaluate INH preventive therapy in public clinics, with special emphasis on compliance and adverse reactions.

## Methodology

Data from the Isoniazid Chemoprophylaxis Records for the State of Maryland (excluding Baltimore City data which are main-

tained separately) are routinely entered into a microcomputer database. The information for patients who started preventive therapy between January 1, 1988 and December 31, 1988 was analyzed. The demographics (age, sex, race, and refugee status), duration of treatment, the reasons preventive therapy was started, and the reasons preventive therapy was stopped were studied.

Duplicate records were deleted. The two reasons for duplicate records were data entry errors and patients who restarted after having quit preventive therapy earlier in the year. In the case of data entry errors, the most correct record was used in the analysis. If neither record seemed correct, one record was deleted and fields that did not match in the records were left blank so that they would not be included in the analysis. In the case of duplicate records due to patients quitting and restarting preventive therapy, the most recent record was used, with adjustments made to correct for the number of months preventive therapy was taken.

Epi Info version 5 was used to test for statistical significance. P values  $\leq 0.05$  were considered significant.

## Results

During the study period, 1,036 records were received from local health departments. As expected, the patients were relatively young: their mean age was twenty-six years (median, twenty-five years), and 809 (78 percent) of them were under age thirty-five (Table 1). Fifty-six percent (N=582) of the 1,026 patients for whom gender was indicated were male. The ratio of males to females receiving preventive therapy (1.3:1) was different from the ratio in Maryland's general population (0.9:1).

Table 1. Distribution by Age, Race, and Sex

Age Group	Asian		Black		White		Native American		Not Known	Total
	M	F	M	F	M	F	M	F		
0-14	28	20	24	28	47	31	1	1	13	193
15-34	81	72	108	62	127	122	0	1	43	616
35-55	25	23	37	23	35	28	1	0	3	175
55+	10	4	13	5	8	6	0	0	6	52
	144	119	182	118	217	187	2	2	65*	1,036

\*The sex of two Asians and three whites was unknown.

The race of 94 percent (N=977) of the total patient population was known. Whites constituted the largest proportion, 407 patients (39 percent); 300 patients (29 percent) were black; and 265 (26 percent) were Asian, 86 percent of them being refugees. Four patients were Native American, less than 1 percent of the study group. Compared to the State's population, blacks and Asians (22 percent and 1.5 percent, respectively, of Maryland's population) were overrepresented among the individuals receiving INH preventive therapy at local health departments.

**Refugees.** Ninety-nine percent of the collected records indicated whether the patient was a refugee: this categorization applies to 396 patients (38 percent) in the study group. Significantly more refugees from Asia (58 percent) than from other parts of the world received preventive therapy. The age and sex distributions of the refugee patients were not significantly different from those distributions in the total study population. The most common reason for refugee patients to start preventive therapy was a positive PPD with no other risk factors.

**Previous Preventive Therapy.** Fifty-four persons (5 percent) reported having received partial preventive therapy in the past. Almost all of them had received such therapy within the previous three years.

**Reasons for Starting and Ending Therapy.** Reasons for starting preventive therapy were available in 990 records (96 percent), and reasons for cessation of therapy were indicated in 1,019 (98 percent). Patients sixty-five years of age or older (older patients) and Asian patients were more likely to start preventive therapy because of contact with a person with tuberculosis; significantly fewer whites started therapy for this reason. Older patients and black patients were more likely to begin therapy because they were recent converters; significantly fewer refugee patients and Asian patients started therapy for recent converter status. Older patients, Asian patients, and refugees were more likely to start INH preventive therapy because of other medical conditions.

Comparison of the reasons for starting and stopping preventive therapy revealed the following (Table 2):

Table 2. Reasons for Starting and Stopping INH Preventive Therapy

		Reason Stopped								
Reason Started		Unknown	INH Adverse Reaction	Stopped by MD; No Adverse Reaction	Against Medical Advice	Completed Treatment	Lost to Follow-up	Moved with Referral	Died	Total
	Unknown	4	3	6	11	15	3	4	0	46
	Close Contact	0	1	1	10	71	2	3	0	88
	Recent Reactor	3	7	9	25	102	7	17	0	170
	Asymptomatic									
	<35 yrs of age	4	7	5	90	281	11	27	0	425
	Medical	0	0	0	1	12	0	1	0	14
	Other	6	10	10	55	175	10	26	1	293
	Total	17	28	31	192	656	33	78	1	1,036



1. Significantly more patients who had close contact with someone with tuberculosis completed treatment.
2. Significantly more patients who started therapy because they were recent converters stopped treatment on medical advice for reasons other than INH toxicity.
3. Significantly fewer patients who started therapy because they had positive PPD reactions, had no risk factors, and were under thirty-five years of age stopped treatment with medical advice but no adverse reaction.
4. Significantly more patients who started therapy because they had positive PPD reactions, no risk factors, and were younger than thirty-five stopped treatment against medical advice.
5. Female patients and black patients were more likely to stop therapy on medical advice but without adverse reaction.
6. Significantly more male patients stopped therapy because they moved and were thus lost to follow-up.

The most common reason symptomatic patients stopped INH therapy on the advice of a physician was elevation of liver enzymes. One patient died while taking INH chemoprophylaxis during the study period; the cause of death was renal cancer.

**Adverse Reactions.** Twenty-eight patients (2.7 percent) had adverse reactions to INH. Seventeen of them developed the reactions within the first two months of therapy. Older patients and black patients were more likely to stop preventive therapy due to an adverse reaction. Persons over thirty-five years of age accounted for 50 percent of the individuals with adverse reactions to INH, whereas this age group constituted only 20 percent of the study population. Significantly fewer Asian patients stopped preventive therapy because of an adverse reaction.

Unfortunately, the nature of the adverse reactions was not entered into the database. Attempts were made to locate the medical charts of the affected individuals and thus learn more about the adverse reactions. Such information was obtained for eighteen patients (Table 3). Elevated liver enzymes accounted for 50 percent of the reactions reported.

**Duration of Treatment.** Information on duration of treatment was available for 1,021 patients (99 percent).

**Table 3. Adverse Reactions to INH Among Eighteen Patients**

Reactions	No. of Patients Affected
Abnormal liver function tests	9 (one had a history of liver illness; another reported heavy drinking and seizures)
Fatigue	5 (two also reported nausea; one had fever; one had knee pain)
Vomiting and diarrhea	1
Blurred vision and personality changes	1
Dizziness	1
Stress	1

Approximately half of the patients (N=525, 51 percent) had between six and twelve months of treatment (mean, six months; median, six months).

Treatment was considered complete if the physician considered the duration of treatment to be adequate or if the patient had at least six months of INH treatment. Sixty-four percent (N=652) of the study group completed treatment. Those who completed less than the recommended six months of treatment, yet were still considered to have completed treatment, numbered 155 (23 percent). Thirty-six individuals (5 percent of the study group) received more than the recommended twelve months of treatment. No one with a PPD reaction less than 5 mm took preventive therapy longer than six months.

Medications were stopped against medical advice by 185 persons (20 percent). Significantly fewer persons who started therapy due to contact with someone with tuberculosis stopped treatment before completion compared with those who started for other reasons.

## Discussion

The key strategy for controlling tuberculosis is early identification and treatment of persons with communicable forms of the disease (sputum positive).<sup>1</sup> Many chemotherapy regimens are available to ensure complete cure of pulmonary tuberculosis. Just as important as chemical isolation and treatment of the index case is public health intervention including preventive treatment of contacts, public health education, and screening of high-risk groups.

This is the second study of isoniazid preventive therapy in Maryland. The first study, by Dash and colleagues, was published in 1980.<sup>8</sup> The two studies are not strictly comparable because, at the time of the earlier study, INH was often recommended for individuals over thirty-five years of age without risk factors. Also, the earlier study analyzed data from only fifteen local health departments, whereas the present report encompasses information from twenty-three local health departments.

Dash and colleagues reported a trend toward use of INH preventive therapy in a younger population. Fifty-five percent of their study population was younger than thirty-five. Our 1988 data show a continuation of that trend, 78 percent of the study group being under thirty-five years of age. The increasing percent of younger patients is most likely due to national and state recommendations to limit preventive therapy to persons under thirty-five years of age in the absence of risk factors, due to concern about adverse reactions. In addition, lack of resources has forced health departments to be more selective in offering preventive therapy.

In the 1980 Maryland study group,<sup>8</sup> 55 percent of the participants were female and 43 percent were male. The 1988 figures portray the reverse proportions: 43 percent of our patients are female and 56 percent are male. Reasons for the change in sex distribution are not clear.

The majority of patients in Dash's study were white



(55 percent). Whites constitute only 39 percent of patients in the current series. The decrease may be due to the increase in the number of refugees now receiving preventive therapy.

Refugees accounted for the significant increase in the number of patients on preventive therapy with a positive PPD test and no other risk factors for tuberculosis. It is important to note that blacks and older patients were more likely to start preventive therapy due to skin test conversion, suggesting transmission of tuberculosis in these populations.

One reason that patients who have had contact with someone with tuberculosis are more likely to complete preventive therapy is that they have seen the effects of the disease and do not want to experience them. It is reassuring that those at high risk of developing tuberculosis, such as close contacts and recent converters, are more likely to complete preventive therapy.

Overall, the rate of adverse reactions to INH was low (2.7 percent). Elevated liver enzymes and gastrointestinal symptoms were the most commonly observed complications of preventive therapy in this study; the only death was attributed to renal cancer, not to INH administration. The three types of side effects that have been noted with INH are as follows: (1) direct, (i.e., peripheral neuropathy and anemia); (2) allergic reactions such as skin rash, swelling of the tongue, and fever; and (3) hepatocellular toxicity which may result in hepatitis. Careful monitoring of the patient taking INH decreases the likelihood of serious complications.

The percentage of patients in this series who stopped treatment on medical advice for any reason, with or without INH side effects, is only 5.7 percent. The experience gained in the public sector through provision of medical care to socially disadvantaged populations should reassure physicians in the use of INH by persons who meet the criteria for preventive therapy. Concern about adverse reactions is not a justifiable reason for not prescribing INH preventive therapy. Given the present litigious climate, physicians may be more likely to be sued for not providing therapy to prevent tuberculosis than for side effects of the medication.

INH chemoprophylaxis is recommended for the following groups of asymptomatic people: (1) those who have been in contact with someone with tuberculosis; (2) recent converters; (3) children younger than fifteen; (4) people with a positive PPD and another risk factor; (5) individuals younger than thirty-five with a positive PPD; and (6) those with other medical reasons such as an abnormal chest x-ray film. The recommended period of INH treatment is six months to a maximum of twelve months. Since very little additional benefit is gained by providing twelve months of preventive therapy compared with six months, the shorter regimen is recommended for public clinics, except for persons with special conditions such as HIV infection or chest x-ray film findings consistent with past tuberculosis. The usual dose of INH is 10 mg/kg daily for children and 5 mg/kg daily for adults, up to a maximum dose of 300 mg per day.

Medical management of INH preventive therapy includes monitoring of possible adverse reactions. Patients should be seen on a monthly basis. The protocol recommended for public clinics requires monthly monitoring of symptoms; liver function tests are ordered only if the patient has symptoms. Baseline liver function tests are not ordered unless the patient is older than thirty-five or has a condition that may affect liver function. Pyridoxine supplements are recommended for women using oral contraceptives and for persons with the following disorders: malnutrition, seizure disorders, or chronic liver or renal disorders. Serum levels of phenytoin should be monitored in persons with seizure disorders.<sup>1</sup> Drug interactions between isoniazid and acetaminophen have been recently suggested.<sup>9</sup> The most recent recommendations for INH preventive therapy are presented in Table 4. Questions have been raised about the problem of anergy in patients with HIV infection. An immunosuppressed patient with a history of significant tuberculin reaction would be a suitable candidate for preventive therapy.<sup>10</sup>

The guidelines from the Centers for Disease Control and the American Thoracic Society recommend that all persons infected with HIV who have a negative tuberculin skin test reaction (i.e., 5 mm) and anergy may also need to be considered for isoniazid preventive therapy based on the individual's likelihood of infection with *M. tuberculosis*. For this group, preventive therapy is recommended for those who are known contacts of patients with infectious tuberculosis and those from populations in which the prevalence of tuberculosis infection exceeds 10 percent, such as intravenous drug abusers.<sup>11</sup>

**Table 4. Criteria for Determining Need for Preventive Therapy for Persons with Positive Tuberculin Reaction**

Category	Age Group (yr)	
	<35	≥35
With risk factor*	Treat all ages if reaction to 5TU PPD is ≥ 10 mm (or ≥ 5 mm and patient has had recent contact with TB, is HIV infected, or has radiographic evidence of old TB)	
No risk factor; high-incidence group <sup>+</sup>	Treat if PPD ≥ 10 mm	Do not treat
No risk factor; low-incidence group	Treat if PPD ≥ 15 mm <sup>§</sup>	Do not treat

\* Risk factors include HIV infection, recent contact with an infectious person, recent skin-test conversion, abnormal chest radiograph, intravenous drug abuse, and certain medical risk factors (see text).

<sup>+</sup> High-incidence groups include foreign-born persons, medically underserved low-income populations, and residents of long-term care facilities.

<sup>§</sup> Lower or higher cutpoints may be used for identifying positive reactions, depending on the relative prevalence of *Mycobacterium tuberculosis* infection and nonspecific cross-reactivity in the population.



Our data analysis has serious limitations. Information from Baltimore City is not included. Since blacks experience higher rates of adverse reactions to INH,<sup>5</sup> our reported incidence of adverse reactions to INH may not be accurate for the entire State.

Our database currently lacks accurate information regarding the duration of therapy: this system tends to overestimate the number of months patients collected INH because adjustments were not made for noncompliance. Even if patients collect the drug routinely, they may not ingest it regularly. It is reassuring that only 20 percent of the patients stopped preventive therapy on their own. Anecdotal reports suggest that referral mechanisms in place to assist patients when they move result in better compliance. Many of the persons certified as having completed preventive therapy in less than six months were those who had been persuaded to complete therapy following an earlier incomplete attempt or had been referred to a clinic to complete the remaining months after moving into that county. Also, individuals who have close contact with tuberculosis cases need preventive therapy for only three months if their PPD test continues to be negative.

This study illustrates the importance of periodic evaluations of data collected to ensure that appropriate information is gathered and that the data recorded are pertinent and of use to the program. It is interesting to note the changes in risk categories (HIV infection), duration of treatment, and the need for compliance with six months of preventive therapy.

Eradication of tuberculosis as a clinical entity in the United States is an ambitious undertaking. The role of private physicians in treating persons with tuberculosis and in administering INH preventive therapy is crucial to the success of such efforts.<sup>12</sup>

## References

1. American Thoracic Society/Centers for Disease Control. Treatment of tuberculosis and tuberculosis infection in adults and children. *Am Rev Respir Dis* 1986; 134:355-63.
2. Centers for Disease Control. Tuberculosis--United States, 1985--and the possible impact of human t-lymphotropic virus type III/lymphadenopathy-associated virus infections. *MMWR* 1986; 35:74-6.
3. Centers for Disease Control. Tuberculosis and acquired immunodeficiency syndrome--Florida. *MMWR* 1986; 35(37):587-90.
4. Centers for Disease Control. Tuberculosis and AIDS--Connecticut. *MMWR* 1987; 36(9):133-5.
5. Centers for Disease Control. Screening for tuberculosis and tuberculous infection in high-risk populations, and the use of preventive therapy for tuberculous infection in the United States: Recommendations of the Advisory Committee for Elimination of Tuberculosis. *MMWR* 1990; 39(No. RR-8):10-11.
6. Centers for Disease Control. A strategic plan for the elimination of tuberculosis in the United States. *MMWR* 1989; 38(suppl S-3):1-25.
7. Geiter LJ, O'Brien RJ. Conference on new approaches for tuberculosis preventive therapy. *J Infect Dis* 1987; 156(3):536-7.
8. Dash LA, Comstock GW, Flynn JPG. Isoniazid preventive therapy, retrospect and prospect. *Am Rev Respir Dis* 1980; 121:1039-44.
9. Murphy R, Swartz R, Watkins PB. Severe acetaminophen toxicity in a patient receiving isoniazid. *Ann Intern Med* 1990; 113(10):799-800.
10. Snider D, Bass JB. Letter to the editor. *Am Rev Respir Dis* 1987; 135(6):1379.
11. Centers for Disease Control. Purified protein derivative (PPD) tuberculin anergy and HIV infection: Guidelines for anergy testing and management of anergic persons at risk of tuberculosis. *MMWR* 1991; 40(RR-5).
12. Tuberculosis: What the Physician Should Know. American Lung Association, American Thoracic Society, 1986.

## Acknowledgments

We thank Linda Kesselring for her valuable suggestions. James Butler and Mary Joan McHugh helped to type this article. ■

# Gynecare Center Abortion



General Anesthesia & Local Anesthesia  
**FREE Pregnancy Tests (8 AM-12 NOON)**  
SONOGRAMS • BIRTH CONTROL SERVICES  
AIDS TESTING • FEMALE STERILIZATION  
Patriot's Plaza, 8055 Ritchie Hwy, Suite 204, Pasadena, MD



IMMEDIATE CONFIDENTIAL HELP

**761-4774**

TOLL FREE 1-800-548-5062

# MRI UPDATE



Figure 1

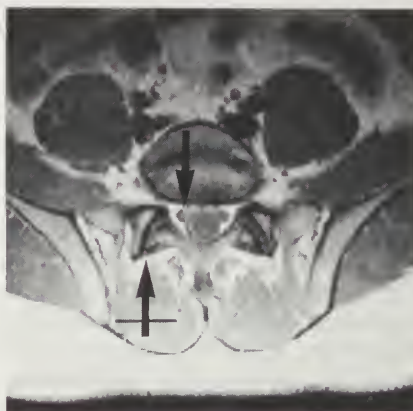


Figure 2

**CLINICAL HISTORY:** This is a 26-year-old male with back pain and right lower extremity radiation.

**FINDINGS:** This is an example of a normal study on a young adult. **COMMENT:** MRI is the screening test of first choice for suspected disorders of the lumbar spine. Notice the clear depiction of the normal L5-S1 disc (figure 1, crossed arrow). The discs of this patient exhibit high signal intensity reflecting normal hydration and none of the discs are narrowed. None of the discs indent the thecal sac which is of intermediate signal intensity and appears as the gray band in the center

of the image. The vertebral bodies are homogeneous and free of destructive lesions. The conus medullaris (arrow) is normal. This sagittal image demonstrates the advantages of MRI over other screening modalities. Routine CT scanning will not display the conus medullaris, lesions of which may masquerade as disc herniation. The general area of coverage is superior with MRI. Disc detail is much better displayed with MRI.

The axial image at L5-S1 (figure 2) exhibits delineation of intraspinal detail far superior to that of CT. The right S1 nerve root is clearly displayed (arrow) surrounded by normal perineural fat

which is the bright high intensity material in the periphery of the spinal canal. State-of-the-art MR images clearly display the bony anatomy of the lumbar spine including the facet joints (crossed arrow). Degenerative diseases and bony neoplasm are routinely detectable.

MRI involves no ionizing radiation and no intrathecal contrast material is needed. It is a patient-friendly outpatient examination well suited for screening purposes.



**Maryland  
Magnetic  
Imaging**

900 Toll House Avenue  
Frederick, MD 21701  
(301) 662-0077

Health Images facilities operate their MRI systems with all available upgrades including contiguous thin slices, high resolution head and body coils, state of the art surface coils, and cardiac gating.

Health Images facilities are a community resource available to all area physicians.



*Health Images, Inc.®*



---

# Metastatic Basal Cell Carcinoma

---

G. Thomas Grace MD and E. George Elias MD, PhD

---

*Dr. Grace is a Plastic Surgeon in private practice in Catonsville, MD. Dr. Elias is Professor of Surgery and Oncology and Director, Surgical Oncology Program, University of Maryland, Baltimore, MD. Reprints: E. George Elias MD, University of Maryland Medical System, 22 South Greene St., Room #N13E02, Baltimore, MD 21201.*

---

*Metastatic basal cell carcinomas of the skin are rare tumors. Early excision of the primary lesion remains the best method of treatment, although unresectable tumors can be controlled by radiation therapy. Patients with regional lymph node metastases can be managed by radical lymph node dissection, while those with systemic metastases can be palliated by a combination of chemotherapy, radiation therapy, and surgery.*

---

**B**asal cell carcinoma is the most common carcinoma and constitutes 65 to 85 percent of all cutaneous cancers.<sup>1</sup> The most common location of basal cell carcinoma is the head and neck area with an 85 percent incidence.<sup>2</sup> The morbidity of basal cell carcinoma is related to recurrence, invasion, and local tissue destruction. Death from disease is rare but does occur.

Metastatic basal cell carcinomas are rare tumors with an incidence of 0.1 to 0.025 percent.<sup>3,4</sup> They are usually encountered in the head and neck region, and have a tendency for local recurrences, regional lymph node (LN) metastases, and systemic metastases mainly to the lungs and bones.<sup>5</sup> In 1951, Lattes and Kessler<sup>6</sup> firmly established the diagnostic criteria for identifying metastatic basal cell carcinoma.

We are reporting two cases of metastatic basal cell carcinoma diagnosed on our service over a fifteen-year period in a tertiary referral center. The purpose of this report is to review the natural history of this potentially lethal disease and suggest management regimens of the primary lesion, the regional LN metastases, and the systemic stage.

## Materials and Methods

*Case One* is a sixty-nine-year-old white male, retired farmer who noted a left chest wall skin lesion. This was excised in a local hospital in June 1979. The pathological examination of the specimen revealed fibrous tissue infiltrated by adenoid basal cell carcinoma with the lateral resection margin positive for tumor. He received no further treatment until about one year later when a local recurrence was noted; this was excised in the same hospital. The pathology examination revealed that the tumor was similar to that excised in 1979. He did well until late 1985 when he began to notice a fullness in his left axilla. He did not seek medical attention until August 1987 when the presence of a large tumor mass in his left axilla was confirmed. This mass measured 6 cm in diameter. The mass was excised and histological examination revealed

metastatic basal cell carcinoma in an LN identical to the primary tumor.

In October 1987, he was referred to our service. The physical exam revealed a well-developed, well-nourished white male with no palpable cervical or axillary lymph nodes. The rest of the physical examination was noncontributory except for a well-healed scar in the left axilla with no palpable lymphadenopathy. There was also a well-healed left infrascapular scar on his back from the previous excision of the primary tumor with no evidence of local recurrence. The workup included a complete blood count, urinalysis, serum chemistries including liver function tests, chest x-ray, bone scan, and computed tomography of the abdomen and the pelvis; all were within normal limits. The patient underwent a left radical axillary dissection with an uneventful postoperative recovery. The pathology revealed no residual tumor in the specimen and all twenty-one examined lymph nodes were free of tumor. The patient has been followed for over three years with no evidence of disease.

*Case Two* is a sixty-five-year-old white female who first noticed a slowly enlarging mass in the posterior aspect of her scalp in 1972. She did not seek medical attention until October 1976. At that time, her physical examination revealed two ulcerated, infected, indurated lesions with elevated margins on the posterior aspect of the scalp. The largest lesion measured 7 x 6 cm and both lesions had clinically extended to the periosteum of the skull. In addition, there was multiple bilateral posterior cervical adenopathy over the trapezius muscle. The biopsy of the primary site showed adenoid basal cell carcinoma extensively infiltrating into the subcutaneous adipose tissue and muscle. The lymph node biopsy showed metastatic basal cell carcinoma similar in characteristic to the primary. A technetium 99M bone scan showed multiple areas of increased uptake. However, the bone survey was negative and the patient was free of skeletal symptoms. In addition, the serum alkaline phosphatase and liver-spleen scan were normal.

The patient was managed initially by radiation therapy to the scalp (6,660 rad) and to the bilateral posterior cervical nodes (5,275 rad) with an excellent response. During the follow-up, the patient developed multiple local recurrences of basal cell carcinoma in the scalp, outside of the previous irradiation ports. These were treated with multiple surgical excisions and additional irradiation. In May 1978, the patient developed an enlarged upper cervical node which was excised and the histology verified as metastatic basal cell carcinoma. Therefore, she was treated with additional irradiation (6,000 rad), again with complete response.

In March 1979, the patient complained of pain in the lower part of her back and had great difficulty walking. A bone scan showed an increase in the uptake when compared to the previous bone scan, indicating progression of the disease. A bone survey showed osteolytic and osteoblastic metastases to the thoracolumbar spine and pelvis.

A bone biopsy in April 1979 confirmed the presence of metastatic basal cell carcinoma, again similar to the primary. The patient was treated by systemic chemotherapy consisting of cisplatin and bleomycin sulfate. She was well-hydrated, and then received 100 mgm per meter square of intravenous cisplatin (day one). This was followed by hydration and diuresis. On day three, the patient received 15 milligrams per meter square of bleomycin sulfate by intravenous push, followed by a continuous infusion of 15 micrograms per meter square per day for five consecutive days. This regimen was repeated once per month. There was subjective as well as objective improvement; the patient became more ambulatory, and there was a drop in the serum alkaline phosphatase level from 284 IU to 198 IU, and a considerable improvement of the bone scan. However, after three courses, such chemotherapy had to be altered because of a progressive decline in her creatinine clearance from 120 to 48 per minute which limited the administration of cisplatin. Subsequently, she was started on monthly courses of another combination chemotherapy consisting of oral cyclophosphamide (100 mg per meter square per day for fourteen days), intravenous methotrexate (30 mg per meter square on days one and eight), and intravenous 5-fluorouracil (400 mg per meter square on days one and eight). The patient continued to do well for eleven months when she showed signs of disease progression.

She was then treated with intravenous (IV) cisplatin (60 mg per meter square on day one) and IV cyclophosphamide (600 mg per meter square on day one) for two twenty-one-day courses without evidence of response. She then received one course of VP-16 -- Etoposide -- (75 mg per meter square) by continuous IV infusion for five days and failed to respond. She was then treated with two courses of IV doxorubicin hydrochloride (400 mg per meter square) every twenty-one days and again failed to respond. In May 1981, the patient underwent an internal fixation of her right femur for a pathological fracture. She died in December 1981 with progressive disease.<sup>7</sup>

## Discussion

In 1894, the first case of basal cell carcinoma was reported.<sup>8</sup> Few reports suggesting metastatic basal cell carcinoma appeared until 1951 when Lattes and Kessler established the criteria for metastatic basal cell carcinoma.<sup>6</sup> Using these criteria, twenty cases were verified.<sup>6</sup> Their criteria included:

1. the primary lesion must arise from the skin and not mucous membrane or internal organ;
2. the metastatic focus must be at site distant from the primary tumor to exclude any chance of direct spread by local invasion;
3. the primary and metastatic tumor must be histologically similar; and
4. histology of the tumor, particularly at the metastatic site, should not show features of squamous cell carcinoma.



A number of reports have followed using these criteria which have generated over 200 cases of metastatic basal cell carcinomas.<sup>9-12</sup> The true incidence of the disease remains unknown. However, two large reviews suggest an incidence of 0.1 percent to 0.025 percent.<sup>3,4</sup>

Basal cell carcinomas that metastasize usually present as large, very aggressive, ulcerating lesions that cause local tissue destruction. Generally, they are located in the head and neck area and are refractory to conservative local management. They are slow-growing tumors both at the primary and metastatic site. They also tend to recur locally, despite limited surgical excision or radiotherapy.<sup>9</sup> The nonsolid histological types (morphea and adenoid) are the most aggressive pathologic groups that infiltrate microscopically into the surrounding tissue.<sup>9,13,14</sup> The usual route of metastatic spread is to the regional lymph nodes followed by systemic metastatic foci to any parenchymatous organ, especially to the lungs and bones.<sup>5</sup>

Our first case has both normal and abnormal features of metastatic basal cell carcinoma. He is a sixty-nine-year-old caucasian male with a longtime sun exposure as a farmer. The trunk is a rare location from which a primary tumor subsequently metastasizes. The initial tumor focus was not ulcerating, but the histological type was adenoid. Evidence of microscopic infiltration was evident in a positive lateral margin, and it seems that the primary lesion extended beyond its apparent clinical boundaries. The spread to the regional axillary lymph nodes was predictable prior to systemic metastasis. It has been reported that metastases can occur five months to forty-five years (with a median interval of eleven years) after the management of the primary tumor.<sup>15</sup> In our patient, the regional metastatic focus was identified six years after the primary tumor was diagnosed.

The initial location of the basal cell carcinoma in the second case was in the head and neck area. At the time of diagnosis, the lesion was large, ulcerating, and aggressively invading the tissues up to the periosteum with regional lymph node metastases. Despite adequate initial radiotherapy, this patient had refractory disease with frequent recurrences. The initial site of metastatic spread was to the regional lymph nodes and later to the bone. She had negative chest x-rays throughout her clinical course suggesting that the lungs remained free of metastatic disease. This patient had biopsy-proven metastatic disease to the cervical lymph nodes at the time of the diagnosis, and approximately four-and-one-half years after the basal cell carcinoma was first noted by the patient. The following year, the disease had spread to the bone in the form of osteolytic and osteoblastic lesions, and this was verified by biopsy. Although this patient presents the typical natural history of the disease, she is also interesting in that she was treated with a combination of surgery, radiotherapy, and chemotherapy with frequent good response followed by recurrences for over five years from the time of diagnosis (nine-and-one-half years since onset).

The choice of management of basal cell carcinoma

remains wide surgical excision. Free margins should be the main objective. Furthermore, the pathologist should alert the surgeon that s(he) is dealing with a basal cell carcinoma belonging to the nonsolid histological groups and should remind the surgeon of their tendency to metastasize. Furthermore, if the initial excision revealed a nonsolid basal cell carcinoma of the morphea or adenoid type, the surgeon should carry a wider excision. In this select group of patients, prophylactic lymph node dissection is not justified. However, these patients demand careful long-term follow-up. Local and regional unresectable disease can be managed successfully by irradiation, as these seem to be radiosensitive.

Metastatic spread to the lymph nodes can be successfully treated by surgery.<sup>16</sup> Once the disease has spread beyond the regional lymph nodes, a cure no longer seems probable. Prognosis following metastatic disease is generally poor.<sup>15</sup> The medium time of survival after distant metastatic disease is diagnosed is ten to fourteen months. Chemotherapy and radiation therapy combined with surgery have been utilized as palliative measures to treat distant disease. Due to the rarity of these lesions, appropriate protocols have not been formulated to adequately analyze these modalities. Significant improvement in survival after evidence of distant metastatic spread may only be achieved by exploiting a multimodality approach.

## References

1. Scoto J, Fears TE, Fraument FJ. Incidence of Non-Melanoma Skin Cancer in the United States. Publication #82-2433 (National Institutes of Health). U.S. Department of Health and Human Services. December 1981.
2. Robins P, Rabinovitz HS, Rigel D. Basal cell carcinomas on covered or unusual sites of the body. *J Dermatol Surg Oncol* 1981; 7:803-6.
3. Cotran RS. Metastasizing basal cell carcinoma. *Cancer* 1961; 14:1036-40.
4. Paver K, Doyzen K, Burry N. The incidence of basal cell carcinomas and their metastases in Australia and New Zealand. *Australas J Dermatol* 1973; 14:53-6.
5. Mikhail GR, Nims LP, Kelly AP et al. Metastatic basal cell carcinoma. *Arch Dermatol* 1977; 13:1261-69.
6. Lattes R and Kessler R. Metastasizing basal cell epithelioma of the skin: Report of two cases. *Cancer* 1951; 4:866-78.
7. Coker DD, Elias EG, Viravathana T et al. Chemotherapy for metastatic basal cell carcinoma. *Arch Derm* 1983; 119:44-50.
8. Beatles CF. Rodent Ulcer. *Trans Pathol Soc* 1894; 45:176-81.
9. Conley J, Sachs ME, Roma T et al. Metastatic basal cell carcinoma of the head and neck. *Otolaryngol Head Neck Surg* 1985; 93:78-85.
10. Hewat AJ and Levick PL. Metastatic basal cell carcinoma. *Dermatologica* 1987; 174:132-4.
11. Mikhail GR. Metastatic basal cell carcinoma. *J Dermatol Surg Oncol* 1986; 12:507-9.
12. Akiyama S, Imaizumi M, Sakamoto J et al. Basal cell carcinoma with lung metastasis. *Jpn J Surg* 1985; 15:215-220.
13. Dellon AL. Host-tumor relationships in basal cell carcinoma and squamous cell cancer of the skin. *Plast Reconstr Surg* 1978; 62:37-48.
14. Pickering PP and Nickel WR. Classifications of basal cell carcinoma. *Plastic Reconstr Surg* 1957; 19:218-23.
15. Safai B and Good RA. Basal cell carcinoma with metastasis. *Arch Pathol Lab Med* 1977; 101:327-31.
16. Hartman R, Harman S, Green M. Long-term survival following bony metastasis from basal cell carcinoma. *Arch Derm* 1983; 119:44-50.



# AM HIGH

## PUT YOUR MEDICAL CAREER IN FLIGHT.

Discover the thrill of flying, the end of office overhead and the enjoyment of a general practice as an Air Force flight surgeon. Talk to an Air Force medical program manager about the tremendous benefits of being an Air Force medical officer:

- Quality lifestyle, quality practice
- 30 days vacation with pay per year
- Support of skilled professionals
- Non-contributing retirement plan if qualified

Discover how to take flight as an Air Force flight surgeon. Talk to the Air Force medical team today. Call

**USAF HEALTH  
PROFESSIONS**

**(301) 981-7897  
COLLECT**





---

# Mortality Due to Septicemia in the Elderly: Factors Accounting for a Rapid Rise

---

Than Winn MBBS, MPH, Matthew Tayback ScD  
and Ebenezer Israel MD, MPH

---

*From The Johns Hopkins University where Mr. Winn is a predoctoral student in the Division of Health Systems, and Dr. Tayback is Coordinator, the Center on Aging, Division of Geriatric Medicine. Dr. Israel is Director, Epidemiology and Disease Control Program, Maryland Department of Health and Mental Hygiene. Reprints: Dr. M. Tayback, The Johns Hopkins University School of Hygiene and Public Health, 615 N. Wolfe St., Baltimore, MD 21205.*

---

*States with a high percentage of blacks, a high physician density, and a high rate of hospitalization among elderly persons are more likely to have higher rates of septicemia.*

---

**R**ecent data published by the National Center of Health Statistics (NCHS) indicate a remarkable trend of increasing mortality due to septicemia.<sup>1</sup> A related data set indicates that Maryland has an age-adjusted rate which is among the highest in the U.S. Age-adjusted mortality due to septicemia has risen steadily since 1950 at an average rate of 6 percent annually, exceeding the average rate increase of each of the twelve leading causes of death. It is logical to believe that the major contribution to the rising trend was made by the elderly population (aged 65 and over). Manton,<sup>2</sup> Setia,<sup>3</sup> and Gross et al<sup>4</sup> have shown that the risk of dying from septicemia increases with age. In addition, examination of 1986 national data reveals an excess mortality of 40 percent when men are compared with women and an excess of 163 percent when blacks are compared with whites.

Septicemia is classified as nosocomial when it is acquired in an institutional setting and as community-acquired when it occurs at home. Morbidity statistics of septicemia are obtained from hospital discharge summaries when the condition is reported as either the principal or one of the secondary diagnoses. The diagnosis is usually based on blood culture reports or presenting clinical manifestations. Mortality statistics on the other hand are based on death certificate reports when septicemia is classified as the underlying or contributory cause of death. In 1986, septicemia was ranked thirteenth among the fifteen leading causes of death.

## Epidemiology of Septicemia Mortality

The prevalence of death due to septicemia is given full expression if one considers multiple-cause data. Septicemia as one of the multiple causes of death has been noted on death certificates at least six times more often than it has been noted as the principal or underlying cause of death (e.g., 6.6:1 in 1978<sup>5</sup> and 6.5:1 in 1979<sup>6</sup>). Consequently, only a small fraction (15 percent) of deaths as-

sociated with septicemia are represented by conventional mortality statistics.

Two estimates<sup>7,8</sup> made independently and by somewhat different methods suggest that approximately one-half of all deaths among bacteremic patients in the U.S. can be attributed directly to blood-stream infections. Wenzel,<sup>9</sup> based on the Study on Efficacy of Nosocomial Infection Control (SENIC)<sup>10</sup> and four case-control studies on nosocomial bacteremia, estimated an annual total of 24,000 deaths attributable directly to nosocomial bacteremia; this alone would place septicemia at the tenth position among leading causes of death in the U.S. since 1976.

These studies indicate that septicemia as an underlying cause of death may have been underreported. They also indicate that septicemia is a cause of significant morbidity and mortality, and contributes to a substantial economic burden related to excess length of hospital stay.

To provide insight into the means of controlling death due to septicemia, we have investigated three relevant questions:

1. Is the rising trend in the rate of mortality due to septicemia chiefly attributable to the elderly population ages 65 years and over?
2. Is there a significant variation in the age-adjusted elderly septicemia mortality rate\* among the states?
3. Can the factors be identified that account for interstate variance in mortality due to septicemia among the elderly?

## Materials and Methods

U.S. Vital Statistics Reports<sup>11</sup> for the period 1950-1987 and the NCHS Mortality Data Tape<sup>12</sup> for 1985 are major sources of information for this study. Independent variables for multiple regression analysis are based on information obtained from the American Hospital Association, the U.S. Bureau of Census, the U.S. Department of Commerce, and the Health Care Financing Administration.<sup>13-17</sup>

## Findings

*General Patterns and Trends of Septicemia Mortality Rates in the United States.* During the last three decades, the number of deaths due to septicemia in the U.S. has increased from 1,730 to 18,600.<sup>11</sup> In the wake of staphylococcal epidemics during the fifties, it is not surprising to find a 200 percent rise in mortality between 1950 and 1960. In 1959, Finland et al<sup>18</sup> reported a nearly fourfold rise in the occurrence of *Staphylococcus aureus* bacteremia and an even greater rise of gram-negative bacilleamia at the Boston City Hospital between 1935 and 1957.<sup>19</sup> After reaching a maximum

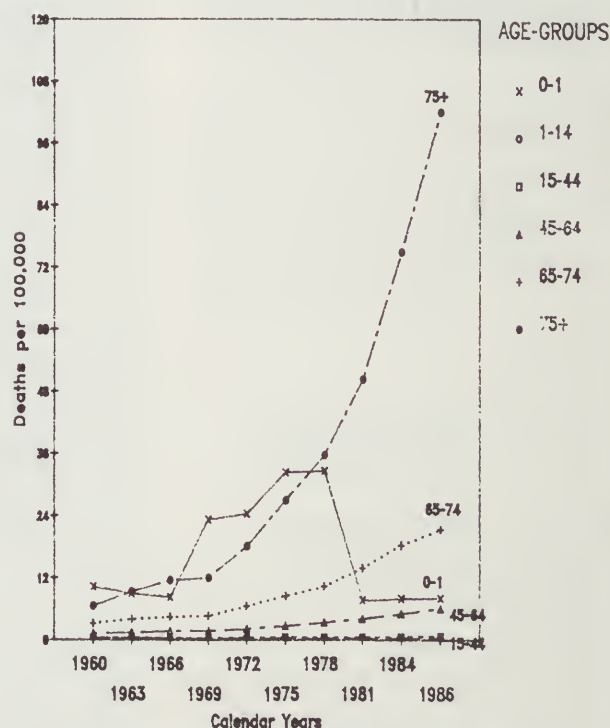
annual rate of increase in 1960, the national age-adjusted septicemia mortality rate rises steadily at a rate of 60 to 70 percent per decade. These findings favor the theory that septicemia mortality, even after controlling for the effect of age, is on the rise.

Given that the age-adjusted septicemia mortality rate is rising over time, it is pertinent to determine which demographic subgroups contribute most to this phenomenon. Although 20 percent of total septicemia deaths occurred among the elderly aged 65 and over in 1950, this proportion rose to 79 percent by 1986, a three-fold increase. (Table 1) It is instructive to note that in 1950, the highest proportion (29 percent) of total deaths due to septicemia was attributable to newborns. This proportion decreased dramatically over time; in 1986 it was less than 2 percent.

Figure 1 shows age-specific death rates due to septicemia from 1958 through 1986. Three features are noteworthy. First, the septicemia mortality rate is high among the extreme ages (namely, zero to one and sixty-five and over). Second, septicemia mortality rates among the elderly have increased over time, notably

**Table 1. Septicemia Mortality Attributable to Infants and the Elderly for Selected Calendar Years U.S. 1950-1986.**

Years	% Among Infants	% Among Elderly
1950	29.1	20.3
1960	21.0	35.6
1970	24.2	42.8
1980	2.4	72.7
1986	1.6	79.0



**Figure 1. Age-specific Mortality Due to Septicemia, United States, 1958-1986**

\* Age adjusted mortality rate for elderly septicemia has been calculated using 1980 U.S. elderly census population as the standard population.



during the last two decades. The third point worthy of note is the dramatic rise and fall of the infant septicemia mortality rate between those calendar years in which a classification switch from old-to-new International Classification of Diseases (ICD) revisions<sup>20-23</sup> took place. Because sepsis in newborns (commonly following umbilical infection) was assigned to *infection of the newborn* in ICD-7, septicemia mortality among infants was low in 1950 through 1967. From 1968 through 1978 when ICD-8 was in effect, it rose because umbilical sepsis was coded under the same rubric as septicemia. From 1979 onward, septicemia among newborns was reassigned in the ICD-9 to *conditions of the newborn*, thereby reducing infant septicemia mortality back to its original pre-ICD-8 level. These changes are artificial due to ICD revisions.

Figure 2 depicts trends of septicemia mortality rates among the elderly by four major race/sex groups. A trend analysis indicates that the septicemia mortality rate is rising by 34 percent and 40 percent per year among white elderly men and women, respectively. Among black elderly persons, the rate rose even faster, 45 percent in men and 46 percent in women. These figures suggest that race has more of an impact on septicemia mortality trends than gender.

The evidence of racial differences in septicemia mortality among the elderly is further substantiated by analysis of 1987 Maryland mortality data.<sup>24</sup> In 1987, black elderly persons died of septicemia at a death rate 100 percent greater than their white counterparts.

*State Variances in Septicemia Mortality Among the Elderly.* In 1985, 1,470,545 Americans over age sixty-five died. Of these, 13,402, or 1 percent of the deaths were

due to septicemia. As shown in Table 2, Maryland had the highest elderly septicemia mortality rate at 94.6 per 100,000, while Florida and South Dakota were the lowest with 22 per 100,000. The extremely high septicemia mortality for Maryland was confirmed by independent analysis of 1987 data provided by the Maryland State Health Department.

A simple correlation analysis employing each state as a unit of observation indicates that the age-adjusted septicemia mortality rate among the elderly is significantly associated with the proportion of blacks in the community ( $r = 0.49, p < 0.01$ ), physician density ( $r = 0.36, p < 0.05$ ), and nurse density ( $r = 0.31, p < 0.05$ ). Of interest is the finding that the rate also varies positively with the hospital discharge rate of elderly patients ( $r = 0.2, p = 0.16$ ). Simple correlation ratios with other variables are not significant. Among the potential determining factors, one finds a significant intercorrelation. Physician concentration, for instance, is highly correlated with urbanization ( $r = 0.70$ ) and with median per capita income ( $r = 0.66$ ). Nurse concentration is highly associated with bed occupancy ( $r = 0.78$ ).

When the principal factors are considered jointly, by multiple regression analysis, the percentage of blacks in the population turns out to be the most significant variable accounting for state variance in mortality due to septicemia among the elderly. A total of 46 percent of the variance among states is accounted for by seven independent variables. The percentage of blacks in the population has a significant regression coefficient (b-value) of 0.8 ( $p = 0.001$ ). This implies that for every one percent increase in the proportion of blacks in the population, there would be approximately one additional elderly septicemia death per 100,000 population, controlling for all other independent variables. The multiple regression ratio specific for race suggests that 25 percent of the state variance in the age-adjusted elderly septicemia mortality rate is accounted for by the percentage of blacks in the population.

When a stepwise multiple regression procedure was performed, three independent variables (percentage of blacks, physician density, and discharge rate) turned out to be the most significant variables. These three variables jointly explain 40 percent of the age-adjusted elderly septicemia mortality rate variation while the

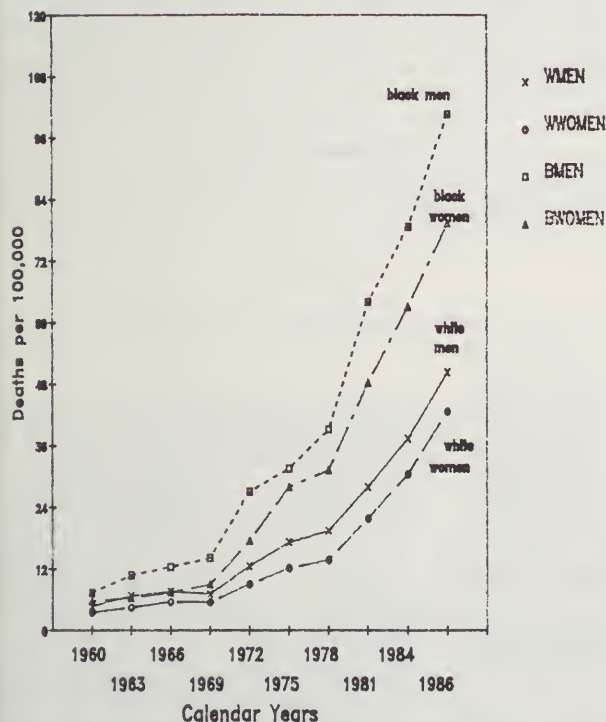


Figure 2. Elderly Septicemia Mortality Rate by Race and Sex United States, 1958-1986

Table 2. Age-Adjusted Mortality Rate Due to Septicemia Among the Elderly, U.S. 1985.

	Top Five States	Deaths Per 100,000
1	Maryland	94.64
2	Louisiana	79.25
3	New Jersey	74.47
4	Pennsylvania	72.57
5	Delaware	71.09
	Lowest Five States	
1	South Dakota	22.02
2	Florida	22.81
3	California	22.96
4	Oregon	24.03
5	Montana	26.87

four other variables combined (nurse density, hospital bed occupancy by the elderly, urbanization, and income per capita) account for just 6 percent of the age-adjusted elderly septicemia mortality rate variation.

The effect of race on septicemia mortality was further investigated by analyzing the 1987 Maryland septicemia mortality data.<sup>24</sup> The crude relative risk of elderly blacks dying from septicemia compared with the risk of elderly whites is 2.2. When age is controlled, the relative risks of black men and women as compared with their white counterparts are 2.4 and 2.1, respectively. Even when the effects of age and sex are simultaneously controlled, the effect of race on septicemia mortality still persists. Using white elderly women as the reference, relative risks for the age-sex-race specific groups are presented in Table 3. Black men and black women are at the highest risk of dying from septicemia.

### Discussion

The thirty-five year history of a rising trend in age-adjusted mortality due to septicemia is largely accounted for by a substantial rise in septicemia deaths among the elderly. Three theories to account for this development are appropriate. The first is that the trend reflects a higher level of ascertainment of septicemia by attending physicians. The second is that physicians are increasingly perceiving septicemia, when present, as a critical determinant of death. The third is that the risk of septicemia is increasing.

Our analyses to date indicate that elderly mortality due to septicemia is significantly associated with race. Black older persons have a risk twice that seen among their white counterparts. This differential is seen nationally and explicitly in Maryland. A less dramatic but significant difference is seen when male elderly are compared with female elderly. This variance between races and between sexes is not ascribable to different ascertainment or certification practices.

Excess septicemia mortality among the black elderly may be due to the higher prevalence of diabetes and the associated end organ diseases of the kidney, and by lower economic circumstances which may have an impact on nutritional status.

Our finding of a positive correlation between physician density and septicemia mortality explains, in part, the comparatively high rate noted for Maryland. It is rational to speculate that elderly patients residing

in a high physician density area are more likely to be subjected to increased hospitalization and, hence, to an increased risk of septicemia through invasive instrumentation and hospital infection. High physician density areas tend to have better facilities for diagnosis which results in a higher probability of discovering septicemia and leads to a higher rate of certification of death due to septicemia. About fifty percent of the variance in mortality which remains unaccounted for in our model could be due to many factors. For instance, differences in policies in regard to the use of diagnostic procedures (blood cultures in this case) among hospital medical staffs, and the adoption and interpretation of different clinicopathologic algorithms among physicians may have a substantial impact on the manner in which septicemia is classified. Although the authors did not attempt to investigate a consistent interstate variance in septicemia mortality over time, the same pattern of mortality is found in 1987 as was described in 1985.

Our study leads to the conclusion that (1) the rising trend in mortality due to septicemia is attributable chiefly to the elderly population aged sixty-five years and over; (2) there is a significant variation in age-adjusted septicemia mortality rates among the states; and (3) states with a high percentage of blacks, a high physician density, and a high rate of hospitalization among elderly persons are more likely to have higher rates of septicemia.

Further research clarifying the risk factors resulting in elevated mortality due to septicemia among black elderly persons is strongly recommended.

The increase in death due to septicemia appears to reflect a growing perception that overwhelming infection is a problem of considerable import. The burden of illness associated with aging is often modifiable by surgery, other invasive procedures, and hospitalization. The benefits of such interventions are accompanied by risks, one of which is death due to septicemia. This risk, if aggressively addressed, may be reduced by primary and secondary prevention.<sup>25</sup>

### References

1. National Center for Health Statistics. Advance Report of Final Monthly Statistics, 1988. DHHS Monthly vital statistics report. 1990; 37(6) Supplement.
2. Manton KG. Cause specific mortality patterns among the oldest old: Multiple cause of death trends 1968 to 1980. *J Gerontol* 1986; 41(2), 282-9.
3. Setia U, Serventi I and Lorenz P. Bacteremia in a long-term care facility: Spectrum and mortality. *Arch Intern Med* 1984; 44:1633-35.
4. Gross PA, Rapuand C, Adrignolo A et al. Nosocomial infections: Decade-specific risks. *Infect Control Hosp Epidemiol* 1983; 4(3):145-7.
5. National Center for Health Statistics. Multiple causes-of-death in the United States 1984; 32(10) Supplement 2.
6. Centers for Disease Control. Mortality and Morbidity Weekly Report 1989; 38(8).
7. Weinstein MP, Reller B, Murphy JR et al. The clinical significance of positive blood cultures: A comprehensive analysis of 500 episodes of bacteremia and fungemia in adults. I Laboratory and epidemiologic considerations. *Rev Infect Dis* 1983; 5:35-53.
8. Bryan CS, Hornung CA, Renolds KL et al. Endemic Bac-

**Table 3. Distribution of Mortality Rates Due to Septicemia Among Race-Sex-Age Groups and Relative Risks - Maryland 1987.**

Race/Sex	Mortality Rate Per 100,000*	Relative Risk**
White Women	87.7	1.0
White Men	119.6	1.4
Black Women	184.25	2.1
Black Men	226.7	2.6

\* age-race-sex specific mortality rate due to septicemia

\*\* white women are the reference group



teremia in Columbia, South Carolina. *Int J Epidemiol* 1986; 123: 123-7.

9. Wenzel, RP.: The mortality of hospital-acquired blood-stream infections: Need for a new vital statistic? *Int J Epidemiol* 1988; 17:225-7.

10. Haley RW, Culver DH, White JW et al. The nationwide nosocomial infection rate: A new need for vital statistics. *Am J Epidemiol* 1985; 121(2):159-67.

11. National Center for Health Statistics. Vital Statistics of the United States 1950-1986; Vol II (Mortality Part A).

12. National Center for Health Statistics. Public Use Data Tape Documentation, Mortality Detail, 1985 Data. 1987.

13. American Hospital Association. Hospital Statistics 1986 Edition. Chicago: American Hospital Association. 1986.

14. US Bureau of Census. National Data Book and Guide to Sources: Statistical Abstract of the US. 107th edition. Washington DC: US Department of Commerce, US Bureau of Census. 1987.

15. US Department of Commerce, US Bureau of Census. County and City Data Book. Washington 1988.

16. US Bureau of Census. Projections of population of the US by age, sex and race, 1983 to 2080. Current Population Reports Series p-25, No 952. Washington DC: US Govt Printing Office, 1984.

17. Health Care Financing Administration. Health Care Financing Program Statistics. Baltimore, MD: Office of Research and Demonstration, Health Care Financing Administration, 1987.

18. Finland MJ, Jones WF and Barnes MW. Occurrence of serious bacterial infections since introduction of antimicrobial agents. *JAMA* 1959; 170:495-6.

19. McGowen JE Jr., Barnes MW and Finland M. Bacteremia in Boston City Hospital: Occurrences and mortality during 12 selected years (1935-1972) with special references to hospital-acquired cases. *J Infect Dis* 1975; 132:316-35.

20. International Classification of Diseases and Injuries. Sixth Revision. Geneva: World Health Organization, 1948.

21. International Classification of Diseases and Injuries. Seventh Revision. Geneva: World Health Organization, 1955.

22. International Classification of Diseases and Injuries. Eighth Revision. Geneva: World Health Organization, 1965.

23. International Classification of Diseases and Injuries. Ninth Revision. Geneva: World Health Organization, 1975.

24. State of Maryland Center for Health Statistics. Maryland Vital Statistics Annual Report 1987. Baltimore, MD: Maryland State Department of Health and Mental Hygiene, 1988.

25. Ziegler EJ, Fisher CJ, Sprung CL et al. Treatment of gram-negative bacteremia and septic shock with HA-1A human monoclonal antibody against endotoxin. *N Engl J Med* 1991; 324:429-36.

**Acknowledgment**

The authors thank Mr. Roy Tansil from the Maryland Department of Health and Mental Hygiene, for retrieving computer data.

INTERIOR DESIGN • SPACE PLANNING •  
FURNITURE & CABINETRY SELECTION • CUSTOM  
CABINETRY • SURGI-CENTERS • SURGERY &  
AMBULATORY CARE FACILITIES • MEDICAL &  
DENTAL OFFICES • LABORATORIES • MEDICAL  
OFFICE BUILDINGS • CONSTRUCTION  
ADMINISTRATION • COST ESTIMATING



**LEVIN/BROWN & ASSOCIATES**  
ARCHITECTS/INTERIOR DESIGNERS

17 Warren Road  
Suite 7B  
Baltimore, MD 21208  
(301) 486-9006

When you can buy  
any home, here's  
why you'll choose  
a Villager.



**1.** Villager offers the finest homesite locations—in Green Spring Valley communities as well as Worthington Park and the Falls Road corridor. We'll also build your home on your lot... with our plans or yours.

**2.** Breathtaking estate-size home designs, and the reputation for using the very finest materials and craftsmen.

**3.** The opportunity to work one on one with our designers. We'll custom build from your designs or from ours. Our new 1991 designs include the Euro Classic I Award of Excellence recipient from the Homebuilders Association of Maryland and the next generation of our Euro Classic series. Call now. We're building just a few homes for 1991, from \$290,000 to over \$700,000. Phone Sandy Marenberg or Karen Pine for a personal consultation.

Ruxton—Knollcrest Farms at Hillstead and Huntspring  
Pikesville—Helmsley Court Owings Mills—Worthington Park  
Anton North II—Merry Hill Court Worthington Valley—Dorset Hills



**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

Brokers  
Protected

McDonogh Crossroads Office Park  
20 Crossroads Drive, Suite 113 • Owings Mills, MD 21117  
Phone: (day) 363-0963 (evening) 602-0820

**We Build Beautiful Sunlit Home Additions**



**Sunspace Design Studio, Inc.**  
(301) 882-6200

MHC 16069



# **You know an addict.**

As a physician, addiction is something you must deal with either in your patients, in your colleagues, or in yourself.

Addiction takes many forms – drugs, alcohol, nicotine, food, sex – and can be most efficiently diagnosed and treated when you have the most recent information available.

Med Chi's Annual Conference on Addiction and Physician Health provides you with this information.

**Attend the Medical and Chirurgical Faculty of Maryland  
Physician Rehabilitation Committee's**

## **Second Annual Conference on Addiction and Physician Health.**

And learn how to:

- aid in the early detection and treatment of chemically dependent patients;
- use a traditional addiction treatment approach in the treatment of eating disorders;
- help your patients stop smoking;
- relate the patterns of substance abuse to adolescents; and
- apply the methods of assessment and treatment for alcoholism to various age groups.

**Date:** Saturday, November 16, 1991

**Time:** 8:00 a.m. – 5:45 p.m.

**Fee:** \$50 Med Chi members/\$100 physician non-members/\$25 allied health professionals/NO CHARGE students and residents  
(continental breakfast, lunch and breaks provided)

**Location:** Med Chi Faculty Building, 1211 Cathedral Street, Baltimore, MD 21201

**To register, use form on facing page.**

**For more information call (301)539-0872 in Baltimore  
or 1-800-492-1056 elsewhere in Maryland.**

The Medical and Chirurgical Faculty of Maryland designates this continuing medical education activity for 7 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.



## Schedule: Second Annual Conference on Addiction and Physician Health

- 8:00 a.m. – 8:45 a.m. **Registration/Check-in**  
(continental breakfast)
- 8:45 a.m. – 9:00 a.m. **Conference Overview**
- 9:00 a.m. – 10:00 a.m. **The Role of the Primary Care Physician in the Treatment of Chemical Dependence**

*Dan H. McDougal, M.D., Med Chi Physician Rehabilitation Committee*

- 10:00 a.m. – 11:00 a.m. **Assessment and Treatment of Alcoholism in Different Age Groups**

*Franklin T. Evans, M.D., Chairman, Med Chi Committee on Alcoholism and Chemical Dependence*

- 11:00 a.m. – 11:15 a.m. **Break**

- 11:15 a.m. – 12:15 p.m.

### **Session A: Sexual Exploitation of Patients: Evaluation and Treatment of Sexual Addiction**

*Richard Irons, M.D., Coordinator, Professional Assessment Program, Golden Valley Treatment Center*

### **Session B: Assessment of Adolescent Chemical Dependency**

*Rev. Edward Reading, M.Div., NCAC – II, Assistant Director, Physicians' Health Program, Medical Society of New Jersey*

### **Session C: Primary Prevention of Impairment in Medical Students**

*Susan Kalla, M.D., Director, University Health Services, Johns Hopkins University School of Medicine*

- 12:15 p.m. – 1:30 p.m. **Lunch**

- 1:30 p.m. – 2:30 p.m. **The Impaired Physician**

- 2:30 p.m. – 3:30 p.m.

### **Session A: Drug Testing for Physicians and Other Health Providers**

*Stanley R. Platman, M.D., Vice-President for Medical Affairs and Chief of the Department of Psychiatry, Addictions and Behavioral Medicine, Homewood Hospital Center, an Affiliate Hospital of the Hopkins Health System; Chairman, Med Chi Committee on Physician Rehabilitation*

### **Session B: The HIV Positive Physician**

### **Session C: Utilizing a Traditional Addiction Treatment Approach in the Treatment of Eating Disorders**

*Townsend Pennington, M.D., Medical Director, The Wilough at Naples*

- 3:30 p.m. – 3:45 p.m. **Break**

- 3:45 p.m. – 5:45 p.m. **How to Help Your Patients Stop Smoking**

*Kevin Ferentz, M.D., Assistant Professor, Department of Family Medicine, University of Maryland School of Medicine and Carmine Valente, Ph.D., Deputy Executive Director, Medical and Chirurgical Faculty of Maryland*

- 5:45 p.m. **Adjournment**



## Registration Form

### Med Chi's Second Annual Conference on Addiction and Physician Health

Tuition: Med Chi members – \$50, Physician non-members – \$100, Allied health professionals – \$25, Residents and students – NO CHARGE.

Name: 

LAST										FIRST										MI	
------	--	--	--	--	--	--	--	--	--	-------	--	--	--	--	--	--	--	--	--	----	--

Address: 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

City: 

--	--	--	--	--	--	--	--	--	--

 State: 

--	--

 Zip: 

--	--	--	--	--

Phone: 

		-			-		
--	--	---	--	--	---	--	--

Visa: 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

 Exp. Date 

(month)		(year)	

Signature: \_\_\_\_\_  
Signature required if paying by Visa

To facilitate in room planning, please indicate your breakout session preference:  
(refer to schedule above for topic)

11:15 a.m. – 12:15 p.m.

A ☐  
B ☐  
C ☐

2:30 p.m. – 3:30 p.m.

A ☐  
B ☐  
C ☐

Send this form, along with your VISA number or a check or money order made payable to **Med Chi** to:  
Med Chi Addictions Conference, 1211 Cathedral Street, Baltimore, MD 21201

**REGISTER EARLY—REGISTRATION IS LIMITED**

## Clinical Observations

### Hyperemesis Gravidarum Treated with Lorazepam

**H**yperemesis gravidarum remains a puzzling, resistant, and debilitating condition, painful to both the patient and her physician. The following report details a simple and safe treatment regimen that, in the following instances, resulted in dramatic, sustained remission of this condition, with no apparent ill effects to either mother or child.

Mrs. M, a twenty-six year old caucasian female, first presented at age twenty, six weeks pregnant, and with a two-week history of uncontrollable vomiting. Hospitalization had been required because of the failure of outpatient treatment to control the vomiting. I was asked to see the patient in psychiatric consultation. Several months earlier I had treated her for her first episode of panic attacks. Because this pregnancy had occurred out of wedlock, the suspicion was raised that her hyperemesis might have stemmed from, or been aggravated by, psychogenic stress. The patient seemed well enough adjusted to her situation, but because of the obvious potential for guilt and anxiety, and the absence of other etiology, a trial of Lorazepam, which had been very successful in helping to manage her panic attacks, seemed indicated.

After consultation with the drug's manufacturer, which failed to reveal any evidence of fetal damage in their extensive database, we administered Lorazepam 1 mg IM. Surprisingly, within thirty minutes, the intractable nausea and vomiting ceased entirely. We were able to almost immediately begin oral fluids. We maintained the patient on Lorazepam 3 mg PO, gradually generalized her diet, and discharged her, asymptomatic, three days later on a maintenance dose of Lorazepam 2 mg without recurrence.

Two years later, the patient again became pregnant. This time, she was happily married, the pregnancy was planned, and there was no intervening recurrence of panic symptoms or other anxiety conditions. Yet again, in the sixth week of her pregnancy, hyperemesis recurred, as intractable as during her first pregnancy. Again, an initial dose of Lorazepam 1 mg IM, followed by 2 mg PO in divided doses, brought immediate and sustained relief. This time, however, a Resident was treating another woman with hyperemesis on the unit. Hearing of our success, he treated his patient with the same regimen with similar success.

Fifteen months later, our patient again became pregnant in a planned pregnancy. Again, this third episode of hyperemesis required hospitalization for failure to respond to the more customary measures. Again, she responded promptly to the Lorazepam regimen.

Our patient now has three apparently healthy children four years, two years, and six months old. All three deliveries and subsequent development have occurred without complications.

Interestingly, inquiries of a number of obstetrical colleagues failed to reveal awareness or utilization of Lorazepam for hyperemesis. However, the drug company seemed quite aware of the anti-emetic properties of Lorazepam. We also learned that our colleagues in oncology have for some time been using Lorazepam as one component in an anti-emetic "cocktail" given to patients being treated with chemotherapy.

DAVID TRACHTENBERG MD

Dr. Trachtenberg is a Psychiatrist in Bethesda, MD.

#### Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of *Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel  
MMJ 1211 Cathedral Street  
Baltimore, MD 21201

##### Old Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

##### New Address

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### "Clinical Observations" is a new

feature being instituted by *MMJ*. Its purpose is to encourage an open forum for physicians to report unique clinical observations in a brief and informal manner without the necessity of structured case reports and statistical validation.

These reports should be brief and represent preliminary insight into areas of diagnosis or therapy.

Send your manuscripts to Clinical Observations, *Maryland Medical Journal*, 1211 Cathedral Street, Baltimore, MD 21201-5585.



### Adjuvant Therapy for Patients with Colon and Rectal Cancer: Summary of the National Institutes of Health (NIH) Consensus Statement

Colorectal cancer is a major health problem in the United States. More than 150,000 new cases of colon and rectal cancer will be diagnosed in 1990, and approximately 75 percent will have a primary surgical resection with the hope of complete tumor eradication. In spite of this high resectability rate, nearly half of all colorectal patients die of metastatic tumor.

Adjuvant therapy is administered in addition to surgical treatment of the primary colorectal cancer with the intent to improve outcome. Treatment regimens include chemotherapy, radiation therapy, immunotherapy or combinations of these. While the testing of adjuvant therapies for colorectal cancer has spanned thirty years, it is only in the past decade that a number of clinical trials have yielded positive results.

In order to evaluate this recent data and resolve the major issues regarding the use of adjuvant therapy for colorectal cancer, the National Cancer Institute and the National Institutes of Health (NIH) Office of Medical Applications of Research sponsored a Consensus Development Conference on Adjuvant Therapy for Patients with Colon and Rectal Cancer on April 16-18, 1990. Based on scientific presentations and discussions from physicians, scientists, health care professionals, and the general public, a thirteen-member panel wrote a consensus statement. Following are the panel's findings:

- Patients with Stage I colon and rectal cancers are at low risk of recurrence and do not warrant adjuvant therapy. For these groups, surgical resection remains the treatment of choice.
- For colon cancer, current clinical trial data indicate adjuvant therapy with 5-fluorouracil (5-FU) and levamisole is effective for Stage III disease and should be offered to patients unable to enter a clinical trial, unless medical or psychosocial contraindications exist. Specific adjuvant

therapy cannot be recommended at this time for Stage II patients outside of clinical trials.

- For rectal cancer, recent clinical data indicate postoperative adjuvant treatment combining chemotherapy and radiation therapy improves local control and survival for Stage II and III patients. The most effective combination at present appears to be 5-FU, methyl-CCNU, and high-dose pelvic irradiation. However, the use of methyl-CCNU outside of ongoing clinical trials is discouraged because of documented toxicities.
- The American Joint Committee on Cancer system for classifying stages of colon and rectal cancer, also known as the TNM system, effectively describes patients at risk for recurrence and should be used in clinical trials research and clinical practice. Its use is recommended in place of other staging systems, including the Dukes classification.
- Clinical trials are essential for identifying new and refining current adjuvant therapies for colon and rectal cancers. Entry of Stage II and III patients into these trials is encouraged. Separate clinical trials should be conducted for patients with colon and rectal cancer to better define appropriate adjuvant strategies for each group.
- There is a need to better identify with biologic, anatomic, or genetic characteristics those early-stage patients at risk of recurrence who may benefit from adjuvant therapy. The panel also expressed the need to address the issues of quality of life and cost benefit of adjuvant therapy for patients.
- Future clinical trials should address a number of areas. The panel urged trials to improve the effectiveness of current modalities by integrating radiation therapy (for rectal cancer) and adding immune system stimulators (for colon and rectal cancer). They also recommended that researchers seek a better understanding of the mechanisms of action of the drugs in various treatment regimens. Finally, clinical trials for adjuvant therapy should examine differences in incidence and survival in various ethnic and socioeconomically disadvantaged groups.

Single copies of the complete *NIH Consensus Statement on Adjuvant Therapy for Patients with Colon and Rectal Cancer* may be ordered from the Office of Medical Applications of Research, NIH, Building 1, Room 260, 9000 Rockville Pike, Bethesda, MD 20892 (301-496-1143).

### Adjuvant Treatment of Colorectal Cancer: Response to the NIH Consensus Summary Statement

More than 150,000 new cases of colorectal cancer are diagnosed each year in the United States. Approximately 110,000 of these cases are colon cancers, defined as tumors rising above the peritoneal reflection of more than 12 cm proximal to the anal verge, and 45,000 are rectal cancers. These tumors account for about 14 percent of all cancer deaths. The overall incidence of colorectal cancer, furthermore, has been increasing over the past three decades. While some 75 percent of patients have resectable tumors,

nearly half of all patients will ultimately die of metastatic disease. Because of this, a great deal of attention has been focused on adjuvant therapy.

The rationale of adjuvant therapy is based on the concept that patients with resected tumors who subsequently relapse must have had micrometastases at the time of resection, and that therapy is most effective when the tumor burden is minimal and consists of actively dividing cells.

Over the past thirty years, numerous studies of ad-

juvant therapy have been conducted, but not until the past few years have larger, prospective studies given reproducible positive results.

In the 1970s, the Veterans Administration Surgical Adjuvant Group (VASAG) conducted a series of studies employing thiopeta, fluorodeoxyuridine (FUDR), then 5-fluorouracil (5FU), either alone or in combination with methyl-lomustine (Me-CCNU). These studies tended to indicate a small benefit for the treated patients, but results were not statistically significant.<sup>1</sup> Other adjuvant studies performed by the Central Oncology Group,<sup>2</sup> Li,<sup>3</sup> Mavligit,<sup>4</sup> and others were generally small uncontrolled studies using historical controls, but they were instrumental in the design of subsequent trials.

More recently, the Gastrointestinal Tumor Study Group (GITSG)<sup>5</sup> published results in 1984 showing no difference in recurrence rates in colon cancer patients treated with chemotherapy in the form of 5FU and Me-CCNU or immunotherapy when compared with surgery alone. A separate GITSG study<sup>6</sup> in Stage B<sub>2</sub>, C<sub>1</sub>, and C<sub>2</sub> rectal cancer patients, however, did show some benefit. Patients treated with surgery alone experienced a recurrence rate of 52 percent, those treated with radiotherapy (4,000 to 4,800 rads) recurred 36 percent of the time, those treated with 5FU and Me-CCNU 39 percent, and those with combined radiation and chemotherapy only 21 percent of the time. The results of this study were quite notable in showing benefit for adjuvant treatment in rectal cancer patients, as well as demonstrating the benefit of combined modality therapy.

In 1988, the National Surgical Adjuvant Breast and Bowel Project (NSABP)<sup>7</sup> C-01 study involving more than one thousand colon cancer patients demonstrated a modest, although significant, improvement in disease-free survival for patients treated with Me-CCNU, vincristine, and 5FU. At five years, the surgery alone patients were 1.29 times more likely to recur and 1.31 times more likely to die than patients given chemotherapy. No benefit was seen in the BCG arm. This study represented the first large, randomized, prospective trial showing significant survival benefit for adjuvant therapy in colon cancer; however, recent data suggest a decrease in benefit with time.

While these studies were in progress, a variety of studies employing portal vein infusions of 5FU were conducted. The rationale behind this treatment is that the major cause of mortality in colon cancer is from hepatic metastasis. Taylor<sup>8</sup> reported decreased hepatic metastases and improved survival in patients given hepatic vein 5FU for seven days after tumor resection. The NSABP,<sup>9</sup> in a confirmatory study, demonstrated a significant improvement in disease-free survival (74 percent v 64 percent) for treated patients. However, there was no decrease in hepatic metastases seen with portal vein infusions, and it was concluded that any benefit seen may have been due to a systemic effect of the infusion.

The foundation for the present National Institutes of

Health (NIH) Consensus recommendation dates back to a study by Verhaegen,<sup>10</sup> published in 1978, in which patients receiving postoperative levamisole had a demonstrably improved survival. While this study had various flaws, it did lead to a trial by the North Central Cancer Therapy Group (NCCTG).<sup>11</sup> This study randomized 401 patients with Dukes' B<sub>2</sub> and C cancers to treatment with surgery alone, levamisole, or 5FU plus levamisole. 5FU plus levamisole produced a significant improvement in disease-free survival (DFS) when compared with surgery alone, while the levamisole-only arm gave borderline DFS benefit. In the subgroup of B<sub>2</sub> and B<sub>3</sub> patients, there was no difference between the three study arms. In patients with Dukes' C colon cancer however, 59 percent of patients receiving the combinations survived disease-free versus 45 percent of surgery-only patients at five years. Levamisole alone did not have a significant impact on survival.

A confirmatory study was then conducted by the Southwest Oncology Group (SWOG), the Eastern Cooperative Oncology Group (ECOG), and the NCCTG. Last year, this Intergroup Study<sup>12</sup> published results with a median three-and-one-half-year follow-up. Significant benefits in disease-free survival and overall survival were seen in patients with Stage C disease, with 66 percent of 5FU-levamisole patients free of disease versus 49 percent of levamisole patients and 47 percent of surgery-only patients. Overall survival figures were 74 percent, 65 percent, and 64 percent, respectively, and it was concluded that there was a 41 percent decrease in the risk of relapse and a 33 percent decrease in the risk of death for patients treated with the combination. There was no significant benefit in patients with B<sub>2</sub> disease, although fewer patients in the treated group had relapsed at the time of the report.

The NIH Consensus panel<sup>13</sup> reviewed these and other studies on April 16-18, 1990 and made several recommendations.

- First was the adoption of the Tumor/Node/Metastasis (TNM) or American Joint Committee on Cancer System of Staging, as opposed to the older Dukes' system or its several modifications (Table 1). Stages I through IV would roughly correspond to Stages A through D (Table 2).
- It was felt that patients with Stage I disease were at a low risk of recurrence and did not require adjuvant therapy. The panel was less firm on Stage II patients, for whom no significant benefit was found in the studies, but adjuvant therapy was not recommended for such patients outside of a clinical trial.
- Stage III colon cancer patients seemed to benefit from combined 5FU-levamisole, and those patients unable to enter a trial should be offered this therapy.
- Stage II and III rectal cancer patients should be offered postoperative adjuvant therapy with radiation and chemotherapy. The most effective



**Table 1. Tumor/Node/Metastasis (TNM) Staging**

TX	Primary tumor cannot be assessed
TO	No evidence of primary tumor
Tis	Carcinoma in situ
T1	Tumor invades submucosa
T2	Tumor invades muscularis propria
T3	Tumor invades through the muscularis propria into the subserosa, or into nonperitonealized pericolic or perirectal tissues
T4	Tumor perforates the visceral peritoneum or directly invades other organs or structures
NX	Regional lymph nodes cannot be assessed
NO	No regional lymph node metastasis
N1	Metastasis in 1-3 pericolic or perirectal lymph nodes
N2	Metastasis in 4 or more pericolic or perirectal lymph nodes
N3	Metastasis in any lymph node along the course of a named vascular trunk
MX	Presence of distant metastasis cannot be assessed
MO	No distant metastasis
M1	Distant metastasis

**Table 2. TNM Staging**

	Tis	NO	MO	Dukes'
Stage O	Tis	NO	MO	
Stage I	T1	NO	MO	
	T2	NO	MO	} A
Stage II	T3	NO	MO	
	T4	NO	MO	} B
Stage III	Any T	N1	MO	
	Any T	N2,N3	MO	
				} C
Stage IV	Any T	Any N	M1	} D

chemotherapy in the various trials appeared to be 5FU plus methyl-CCNU, but the NIH panel was cautious in recommending Me-CCNU outside of a trial because of the renal toxicity and leukemogenic properties of this drug.

For the practicing oncologist, this Consensus Conference was quite helpful but also raised many other issues. The use of 5FU and levamisole, according to the NCCTG and Intergroup protocol, can be considered standard of care for our Stage III (Dukes' C) colon patients. While the use of this treatment for Stage II (B<sub>2</sub>, B<sub>3</sub>) patients outside of a clinical trial was not recommended, certain prognostic features have been identified which define a group of high-risk patients, including those whose tumors perforate the bowel wall and invade adjacent organs or structures; those with a preoperative carcinoembryonic antigen (CEA) greater than 5' aneuploid deoxyribonucleic acid (DNA) content, high S phase activity, colloid, signet ring, or poorly differentiated histology; or 17p or 18p deletions. It is likely and reasonable that such Stage II patients may be offered adjuvant therapy in the community setting. While the Consensus Panel was rather conservative in this regard, a review of the Intergroup Study indicated that only twenty-two of 159 B<sub>2</sub> patients receiving 5FU plus levamisole relapsed at three-and-one-half years, compared with thirty-two of 159 surgery-alone

patients. While these results are not statistically significant, if they persist it would seem logical that adjuvant treatment would ultimately be recommended for this group also.

Other issues which need further clarification are the mechanisms of action of levamisole and definition of the best schedule for use of this drug. Interestingly, 5FU-levamisole has not been particularly beneficial in patients with metastatic disease, and it is clear that 5FU-leucovorin is a better combination in these patients. It is quite likely then that leucovorin rather than, or even in addition to, levamisole may be the agent of choice to be used with 5FU in the adjuvant setting. Indeed, these studies are in progress. Prolonged infusions of 5FU have also demonstrated improved response rates in unresectable colon cancer and this might also prove to be better than bolus 5FU-levamisole in the adjuvant setting.<sup>14</sup> Finally, the use of other 5FU modifying agents such as alpha interferon of Phosphonacetyl-L-Aspartic Acid (PALA) may also prove beneficial in the future trials.

For Stage II and III rectal cancer patients, many community oncologists have employed postoperative radiation and chemotherapy since the original publication of the GITSG 7175 study. A second GITSG study (7180) compared radiation with 5FU or 5FU plus methyl-CCNU.<sup>15</sup> Preliminary analysis suggested no differences in recurrence rates, implying that Me-CCNU may be unnecessary. In fact, a recently cited interim report from the North Central Cancer Treatment Group<sup>16</sup> reveals a recurrence rate 1.2 times higher for patients receiving Me-CCNU. While no survival data are yet available, the increased toxicity and lack of definite improved effectiveness from Me-CCNU suggest that elimination of this agent (or the commercially available CCNU) from drug protocols would be prudent.

The NIH recently disseminated a clinical announcement updating last year's Consensus Conference,<sup>17</sup> not only calling attention to the Me-CCNU data, but also raising the question of 5FU/levamisole or 5FU/leucovorin in the adjuvant therapy of rectal cancer. It also further reviewed the results of several clinical trials, all of which confirmed improved survival from combined modality therapy.

## References

1. Higgins GA, Jr., Humphrey E, Juler GL, le Veen HH, McCaughan J, Keehn RJ. Adjuvant chemotherapy in the surgical treatment of large bowel cancer. *Cancer* 1976; 38:1461-7.
2. Grage TB, Moss SE. Adjuvant chemotherapy in cancer of the colon and rectum: Demonstration of effectiveness of prolonged 5FU chemotherapy in prospectively controlled, randomized trial. *Surg Clin North Am* 1981; 61:1321-9.
3. Li MC, Ross ST. Chemoprophylaxis for patients with colorectal cancer: Prospective study with five-year follow-up. *JAMA* 1976; 235:2835-8.
4. Mavligit GM, Burgess MA, Gutterman JU et al. Prolongation of postoperative disease-free interval and survival in human colorectal cancer by BCG or BCG plus 5-fluorouracil. *Lancet* 1976; 1:871-6.
5. Gastrointestinal Tumor Study Group. Adjuvant therapy of colon cancer—results of a prospectively randomized trial. *N Engl J Med* 1984; 310:737-43.

6. Gastrointestinal Study Group. Prolongation of the disease-free interval in surgically treated rectal cancer. *N Engl J Med* 1985; 312:1465-72.

7. Wolmark N, Fisher B, Rockette H et al. Postoperative adjuvant chemotherapy of BCG for colon cancer; Results from NSABP C-01. *J Nat Cancer Inst* 1988; 80:30-6.

8. Taylor I, Machin D, Mullett M et al. Randomized controlled trial of adjuvant portal vein cytotoxic perfusion in colorectal cancer. *Br J Surg* 1985; 72:359-63.

9. Wolmark N, Rockette H, Wickerham DL et al. Adjuvant Therapy of Dukes' A, B and C adenocarcinoma of the colon with portal vein fluorouracil hepatic infusion: Preliminary results of NSABP protocol C-02. *J Clin Oncol* 1990; 8:1466-75.

10. Verhaegen H. Postoperative levamisole in colorectal cancer. In: Rainer H, ed. *Immunotherapy of malignant disease*. Stuttgart: Schattauer-Verlag, 1978: 94-101.

11. Laurie JA, Moertel CG, Fleming TR et al. Surgical adjuvant therapy of large bowel carcinoma: An evaluation of levamisole and the combination of levamisole and 5-fluorouracil. A study of the North Central Cancer Treatment Group and Mayo Clinic. *J Clin Oncol* 1989; 7:1447-56.

12. Moertel GC, Fleming TR, MacDonald JS et al. Levamisole and fluorouracil for adjuvant therapy of resected colon carcinoma, 1990; 322:352-8.

13. NIH Consensus Statement: Adjuvant therapy for patients with colon and rectum cancer. *JAMA* 1990; 264:1444-50.

14. Lokich JJ, Ahlgren JD, Gullo JJ et al. A prospectively randomized comparison of continuous infusion fluorouracil with a conventional bolus schedule in metastatic colorectal carcinoma: A Mid-Atlantic Oncology Program study. *J Clin Oncol* 1989; 7:425-32.

15. Weaver D, Lindblad AS et al. Radiation therapy and 5-fluorouracil (5FU) with or without Me-CCNU for the treatment of patients with surgically adjuvant adenocarcinoma of the rectum. *Proc ASCO* 1990; 9:106.

16. Krook JE, Moertel CG et al. Effective surgical adjuvant therapy for high-risk rectal carcinoma. *N Engl J Med* 1991; 324:709.

17. National Cancer Institute Clinical Announcement: Adjuvant therapy of rectal cancer. March 14, 1991.

PETER B. SHERER MD, FACP  
Wheaton, MD

## *Maryland Medical Journal* Mission Statement

The purpose of the *Maryland Medical Journal (MMJ)* is to educate and inform its readers of progress in clinical medicine and medical research and of development in other fields of interest to physicians; to promote the science and art of medicine toward the betterment of public health; and to provide a literate forum for open and responsible discussion of matters relevant to the field of medicine.



**Join us in a new kind  
of partnership ...  
uniting doctors,  
lawyers, teachers,  
parents, and youth  
against drug and  
alcohol abuse.**

Become part of the Maryland Doctor/  
Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the war against drugs. Become part of a unique initiative in Maryland to bring doctor/ lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations  
Department at 301-539-0872,  
1-800-492-1056.**

**Doctor/Lawyer/Teacher Partnership  
Against Drugs**



## A Clinical Moment With . . . Diabetes

### Self-management of Diabetes

*Doctor, now that I have a blood glucose testing machine which I use two to three times per week and adjust my insulin accordingly, why do I need to return to your office on a regular basis for the care of my diabetes?*

This question is one that is asked often. The physician can easily list at least ten reasons why close physician supervision of the diabetic patient is important, including the items and techniques that the physician must check.

1. *Technique and equipment.* The patient's technique and his or her equipment needs to be tested for accuracy. It is surprising how sloppy technique can become over a short period of time. Also, the instrument needs to be cleaned by the office staff at almost every visit.

2. *Insulin administration.* Frequent measurement errors occur, especially if insulin mixtures are being used or if the patient is making unsupervised adjustments of the insulin dose. Injection sites should be examined for adequate rotation to avoid lipodystrophy and scarring.

3. *Glycohemoglobin.* The level of glycohemoglobin should be measured twice a year or as appropriate for the degree of diabetic control maintained.

4. *Urine.* Urine should be tested for ketones, glucose, protein, and infection.

5. *Meal plan.* The meal plan should be reviewed and adjusted as appropriate for the patient's weight and activity.

6. *History.* The patient's history should be reviewed for chest pain, shortness of breath, possible hypoglycemic reactions, or ketosis.

7. *Diabetes identification card.* The card should be checked for accuracy as to address, telephone number, and insulin dose. Also, the physician needs to deter-

mine if the patient carries a usable form of glucose to treat hypoglycemic reactions.

8. *Glucagon unit.* Unless the patient lives alone, a disposable glucagon unit should be on hand at home. It should be brought to the office occasionally to confirm that its expiration date has not passed and so that the patient's technique can be reviewed.

9. *Physical condition.* The patient's blood pressure and weight should be checked, along with his or her feet for pulses, fissures, pressure points, hygiene, and status of nail care. The shoes should be examined for fit, interior roughness, run-over heels, and condition of soles. In addition, one should look for evidence or history of peripheral neuropathy, checking the skin, mouth, and other common sites for possible infection.

10. *Eyes.* Finally, the fundi should be evaluated for retinopathy and the patient urged to seek regular supervision by an ophthalmologist.

In addition to the above, the diabetic patient should have an annual physical examination including an electrocardiogram (EKG), complete blood count (CBC), and blood chemistries. The patient should be advised to participate in an annual diabetes update education course. If the patient has never participated in a good diabetes education program of approximately forty hours, that should be recommended rather than the update program. This is important regardless of the number of years since the onset of diabetes. Both diabetic patients and many physicians get a false sense of adequacy of their understanding about the disease from past training. The explosion of knowledge since the general use of self-monitoring of blood glucose, food package labeling, and newer insulins brings about a constant need for continuing diabetes education and updating.

DEWITTE E. DELAWTER MD  
Editor

## Physician Placement Services

The Medical and Chirurgical Faculty of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

**Physician Placement Service**  
**1211 Cathedral St., Baltimore, MD 21201-5585**  
**(301-539-0872)**

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland.

MMJ announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

# 1991 Semiannual Meeting

at the

Carousel Hotel, Ocean City, Maryland

September 13, 14, 15, 1991

**HAVE YOUR VOICE HEARD DURING THE  
SESSIONS ON FRIDAY & SATURDAY.**



## **Friday: September 13**

- |                 |  |
|-----------------|--|
| <b>12:15 pm</b> | Auxiliary Luncheon and Business Meeting -- <i>Washington Room</i>  |
| <b>12:30 pm</b> | Legislative Committee - Albert Blumberg, M.D. -- <i>Delaware Room</i><br>(Open to all Med Chi Members)                         |
| <b>1:30 pm</b>  | Registration ( <i>Exhibits open -- tentative</i> )   |
| <b>2:00 pm</b>  | Opening Remarks -- J. David Nagel, M.D., President -- <i>Maryland/Virginia Room</i>  |
| <b>2:15 pm</b>  | AMA Trustee Welcome -- Robert McAfee, M.D. -- <i>Maryland/Virginia Room</i>  |
| <b>3:00 pm</b>  | <b>COUNCIL MEETING</b> -- Marvin Schneider, M.D. -- <i>Maryland/Virginia Room</i>  |
| <b>4:00 pm</b>  | Break -- Visit Exhibits  |
| <b>4:30 pm</b>  | <b>Medicare Physician Payment Update</b> -- Maurice Hartman and Jean Gray, HCFA<br>Region III -- <i>Maryland/Virginia Room</i> |

## **Saturday: September 14**

- |                   |  |
|-------------------|--|
| <b>8:15 am</b>    | Registration - - Exhibits Open   |
| <b>8:30 am</b>    | Medical Mutual Liability Insurance Society of Maryland -- Medical Records:<br>Charting a Course for the 90s -- <i>Delaware Room</i>      |
| <b>8:30 am</b>    | <b>Mammography Center/X-ray Assistant Standards</b> -- Herman Maganzini, M.D. --<br><i>Maryland/Virginia Room</i>                        |
| <b>10:00 am</b>   | Maryland Medical Political Action Committee (MMPAC) -- John Lynn, M.D. --<br><i>Washington Room</i>                                      |
| <b>10:15 am</b>   | Break -- Visit Exhibits  |
| <b>10:30 am</b>   | <b>HIV Infection: Physician Protocol</b> -- Fred Gill, M.D. -- <i>Maryland/Virginia Room</i>   |
| <b>12:00 Noon</b> | Lunch on your own -- Visit Exhibits  |
| <b>12:00 Noon</b> | AMA Delegation -- George S. Malouf, M.D. -- <i>Washington Room</i>   |
| <b>1:15 pm</b>    | <b>HOUSE OF DELEGATES</b> -- J. David Nagel, M.D. President<br>AMA Trustee Address: Robert McAfee, M.D. -- <i>Maryland/Virginia Room</i> |



4:00 pm Break -- Visit Exhibits  
4:15 pm Long-Term Health Care -- Med Chi Insurance Agency -- *Delaware Room*  
5:30 pm Reception -- *Carousel Boardwalk*

## **Sunday: September 15**

8:30 am -  
12:00 Noon Registration -- Exhibits Open  
9:00 am Smoking Cessation -- Kevin Scott Ferentz, M.D.  
Carmine M. Valente, Ph.D. -- *Maryland Room*  
9:00 am Computers in Medicine -- Rafael C. Haciski, M.D. -- *Virginia Room*  
10:15 am Break -- Visit Exhibits  
10:45 am Advanced Lung Cancer: Diagnostic and Treatment  
Modalities - Imaging, Chemotherapy, Surgery -- Philip Templeton, M.D. --  
*Maryland Room*  
12:00 Noon Adjournment

### **REGISTRATION FORM**

Med Chi Semiannual Meeting/September 13-15, 1991

***Med Chi Members - No Charge***

***Non-Members - \$35.00***

Name: \_\_\_\_\_  
(Please Print) Last First

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_ Component Society (County): \_\_\_\_\_

Maryland License #: \_\_\_\_\_

### **Form of Payment**

☐ Check (payable to Med Chi)

☐ Visa

☐ Mastercard

Credit Card #: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Signature: \_\_\_\_\_

**Return this Registration Form and your payment to:**

Med Chi Conventions  
1211 Cathedral Street/Baltimore, MD 21201-5585

**For additional information...**

Call 539-0872 from the Baltimore area or (800) 492-1056 from elsewhere in Maryland.

**For Carousel Hotel Reservations...**

Call (800) 641-0011.

**Influence Policy!**

# **Make an Impact with MMPAC**

**JOIN THE CAUSE!  
GET INVOLVED!  
GET POLITICAL!**

**Is it fair that only some Maryland  
physicians support the political activity  
that benefits all physicians?**

**JOIN...**

**MARYLAND  
MEDICAL  
POLITICAL  
ACTION  
COMMITTEE**

Send Your \$100 check to:  
John T. Lynn, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201-5585

Contributions to AMPAC and State PAC  
are not deductible as charitable  
contributions for Federal  
income tax purposes





## Board of Physician Quality Assurance Actions

In the Matter of  
Tati I. Okereke MD  
Before the  
Maryland Board of  
Physician Quality Assurance

### Final Order

On December 5, 1988, Tati I. Okereke MD (the Applicant) applied to the Board of Physician Quality Assurance (the Board) for a license to practice medicine in the State of Maryland. The Board, pursuant to the Maryland Medical Practice Act (the Act), *Md. Health Occ. Code Ann.* §14-205, notified the Applicant that there was reason to initially deny the Applicant's application for licensure.

Specifically, pursuant to §14-504(a)(1) and §14-504(a)(21) of the Act, the Board charged that the Applicant:

Fraudulently or deceptively obtains or attempts to obtain a license ... [HO §14-504(a)(1)]; and

Is disciplined by a licensing or disciplinary authority ... for an act that would be grounds for disciplinary action under this section [HO §14-504(a)(21)].

The underlying grounds actionable under HO §14-504(a)(21) include the following:

Fraudulently or deceptively obtains or attempts to obtain a license ... [HO §14-504(a)(1)];

Fraudulently or deceptively uses a license [HO §14-504(a)(21)];

Is guilty of ... unprofessional conduct in the practice of medicine [HO §14-504(a)(3)];

Solicits or advertises in violation of 14-605 of this title [HO §14-504(a)(5)];

Willfully fails to file or record any medical report as required under law, willfully impedes or obstructs the filing or recording of the report ... [HO §14-504(a)(12)]; and

Solicits professional patronage through an agent or other person or profits from the acts of a person who is represented as an agent of the physician [HO §14-504(a)(14)].

### Findings of Fact

The Board finds as follows:

1. The Applicant, Tati I. Okereke MD, filed an application for medical licensure on December 2, 1988.

2. The Applicant was notified by the Board on October 24, 1990 that there was reason to initially deny the Applicant's application for medical licensure.

3. The applicant was informed that a Final Order denying the application for medical licensure would be entered thirty days from the Applicant's receipt of the Board's Notification, unless the Applicant requested a hearing.

4. The Applicant received the Board's Notification of Initial Denial on/about November 5, 1990.

5. The Applicant had to request a hearing by December 7, 1990 in order for the Board not to execute this Final Order.

6. The Applicant did not request a hearing by December 7, 1990, nor by February 9, 1991.

The Board further finds [as to HO §14-504(a)(1)]:

1. The Applicant was authorized to engage in the practice of medicine in the State of New York on January 25, 1972 by the issuance of License Number 111470 by the New York State Education Department.

2. On or about December 5, 1988, the Applicant applied for medical licensure in the State of Maryland by filing an application with the Board.

3. In the Applicant's application for medical licensure to the Board, the Board requested the following information in question 16: "Have you ever been charged with violation of any law relative to practice of medicine or relative to any crime (felony)?"

4. In answer to question 16, the Applicant filed the following answer: "had med. misconduct. hearings. No felony charge."

5. The Applicant failed to disclose the fact that in 1983 and 1986, he had been indicted by the Grand Jury of the County of Erie, State of New York under Grand Jury Indictment Numbers 82-1579-001, 82-1579-SO1, and 82-1579-SO2 for the charges of bribing a witness, a class D felony under New York State Penal Law §215; and sexual misconduct, a class A misdemeanor, under New York State Penal Law §130.20.

6. In the Applicant's application for medical licensure to the Board, the Board requested the following information in question 17: "Have you ever been found guilty in a malpractice suit or settled a malpractice claim?"

7. The Applicant failed to disclose that he had settled a medical malpractice action on June 2, 1987, entitled *Guth v Okereke and Children's Hospital of Buffalo*.

8. The State of Maryland application for medical licensure contains a provision certifying that the information supplied in the application is true and accurate to the best of the applicant's knowledge. The Applicant signed and dated this provision of the application at the time the application was filed with the Board.

9. The Applicant attempted to fraudulently and/or deceptively obtain a medical license in the State of Maryland in that he willfully failed to disclose the above facts in his application for medical licensure.

[As to HO §14-504(a)(21)]:

10. The Applicant was authorized to engage in the practice of medicine in the State of New York on January 25, 1972 by the issuance of License Number 111470 by the New York State Education Department.

11. On or about July 31, 1981, the New York State Board for Professional Medical Conduct, through the New York State Department of Health, charged the

Applicant with the commission of a series of violations of §§6509 and 6509-a of the Education Law of the State of New York (NY Educ. Law) as these provisions relate to professional misconduct. Unprofessional conduct as it relates to the aforementioned sections of the NY Educ. Law is further defined in the Rules of the Board of Regents on Unprofessional Conduct, §§29 *et seq* (8NYCRR29).

12. On nine dates between August 27, 1981 and February 1, 1983, a disciplinary hearing was held before a hearing committee of the New York State Board for Professional Medical Conduct (the Hearing Committee). In March 1983, the Hearing Committee found and concluded that the Applicant had violated certain specifications contained in the Statement of Charges relating to provisions of the NY Educ. Law that apply to professional misconduct, including the following:

- A. The Applicant practiced fraudulently within the meaning of NY Educ. Law 6509, Subdivision 2 (McKinney's Supp. 1980) in that from on or about September 1, 1979 through on or about May 1, 1980, the Applicant engaged in an arrangement with a purported not-for-profit corporation called Erie Women's Center, located in Erie, PA whereby the Applicant provided money to this purported referral service in exchange for referrals of patients to his office.
- B. The Applicant committed unprofessional conduct within the meaning of NY Educ. Law 6509, Subdivision 9 (McKinney's Supp. 1980), as further defined in 8NYCRR29, in that:
  - i) The Applicant failed to file fetal death certificates within the required time.
  - ii) The Applicant provided money to a referral service in exchange for referrals of patients to his office.
  - iii) The Applicant engaged in an arrangement with a purported not-for-profit corporation whereby the Applicant provided money to this purported referral service in exchange for referrals of patients to his office.
  - iv) The Applicant permitted an unauthorized third party, as set forth in 8NYCRR29.1(b)(4), to share in fees received by the Applicant for professional services.
  - v) The Applicant engaged in conduct in the practice of medicine which constituted moral unfitness in the practice of medicine in that:
    - a. The Applicant failed to file fetal death certificates within the required time.
    - b. The Applicant provided money to a referral service in exchange for referrals of patients to his office.
  - vi) The Applicant, in causing to be created a purported not-for-profit corporation called Erie Women's Center, whereby said corporation would advertise the availability through the Applicant, advertised or solicited in a manner not in the public interest and was deceptive

and misleading by purporting to be a public-spirited organization when, in fact, its purpose was to provide the Applicant with abortion patients.

- C. The Applicant participated in the division, transference, assignment, rebate, splitting, or refunding of fees for the furnishing of professional care or services within the meaning of NY Educ. Law 6509-a (McKinney's Supp. 1980) in that from on or about September 1, 1979 through on or about May 1, 1980, the Applicant engaged in an arrangement with a purported not-for-profit corporation called Erie Women's Center, whereby the Applicant provided money to this purported referral service in exchange for referrals of patients to his office.

13. On or about January 3, 1986, the Commissioner of Health of the State of New York (the Commissioner of Health) recommended that the New York State Board of Regents (the Board of Regents) adopt in full the findings of fact, conclusions, and recommendations published by the Hearing Committee in regard to the aforementioned matters.

14. On or about July 31, 1986, the New York State Regents Review Committee (the Regents Review Committee) recommended to the Board of Regents that the findings and conclusions of the Hearing Committee and the Commissioner of Health be accepted.

15. On or about September 26, 1986, the Board of Regents adopted the findings of fact and conclusions of the Hearing Committee and the Commissioner of Health. It further modified the recommendations of the Hearing Committee and the Commissioner of Health as to the measure of discipline recommended for imposition. The Board of Regents voted to suspend the Applicant's license to practice medicine for three years upon each specification of the charges of which the Applicant had been found guilty; that such suspensions were to run concurrently; that execution of the last two years and nine months of said suspensions were to be stayed, at which time the Applicant would be placed on probation for three years; and that the Applicant be fined a total of \$15,000.

16. On or about October 15, 1986, the above disciplinary sanctions were imposed by the New York State Commissioner of Education (the Commissioner of Education) by Order #5929.

17. The actions undertaken and referred to above in §12 of this Notice of Intent to Deny Application for License (the Notice) pursuant to NY Educ. Law §6509 *et seq* are considered professional disciplinary actions by the State of New York.

18. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(A) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(2), (3), and (14).)

19. The above-mentioned professional disciplinary action undertaken by the State of New York and



referred to in §12(B)(i) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3) and (12), and *Md. Health Gen. Code Ann.* §4-213.)

20. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(B)(ii) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3) and (14).)

21. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(B)(iii) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3) and (14).)

22. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(B)(iv) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3) and (14).)

23. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(B)(v)(a) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3) and (12).)

24. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(B)(v)(b) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3) and (14).)

25. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(B)(vi) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3) and (5). Also see COMAR 10.32.01.09.)

26. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §12(C) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(14).)

27. The actual suspension of the Applicant's medical license in the State of New York commenced on March 1, 1988 and terminated on May 31, 1988. The Applicant's medical license in the State of New York was then placed on a probationary status as set forth under Order #5929.

28. On or about February 15, 1989, the Applicant was charged by the New York State Board of Professional Medical Conduct, through the Department of Health, with violations of the terms of probation imposed as a result of Order #5929.

29. On four dates between April 13, 1989 and July 5, 1989, violation of probation hearings were held before an Administrative Law Judge (the ALJ) appointed by the New York State Department of Health. In a report entitled "Administrative Law Judge's Report," dated

November 28, 1989, the ALJ found that the Applicant violated certain conditions of his probation in committing the following acts:

- A. The Applicant willfully submitted false applications in seeking re-appointment for medical staff privileges at Children's Hospital of Buffalo, NY and evidenced moral unfitness in the practice of medicine in so doing, in violation of NY Educ. Law 6509, Subdivision 9, as further defined in 8NYCRR29.1(b)(5) and (6).
- B. The Applicant willfully submitted two applications for medical staff re-appointment to the Buffalo General Hospital, Buffalo, NY in which he provided false information, in violation of NY Educ. Law 6509, Subdivision 9, as further defined in 8NYCRR29.1(b)(5) and (6).
- C. The Applicant willfully submitted an application for licensure in the State of Maryland in which the Applicant provided false or misleading information, in violation of NY Educ. Law 6509, Subdivision 9, as further defined in 8NYCRR29.1(b)(5) and (6).

30. On or about July 10, 1990, the Regents Review Committee unanimously recommended to the Board of Regents that it accept the findings, conclusions of law, and recommendation of the ALJ.

31. On or about July 27, 1990, the Board of Regents, by Order Number 10761, voted to accept the recommendations of the Regents Review Committee as to the violation of probation proceedings. As a result, the Applicant's license to practice medicine in the State of New York was revoked, effective on or about August 11, 1990.

32. The actions undertaken and referred to above in §§29 and 30 of the Notice, pursuant to New York Public Health Law 230 *et seq* (McKinney Supp. 1989), are considered disciplinary actions by the State of New York.

33. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §29(A) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(3).)

34. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §29(B) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland §14-504 of the Act. (See HO §14-504(a)(3).)

35. The above-mentioned professional disciplinary action undertaken by the State of New York and referred to in §29(C) of the Notice, *supra*, would be grounds for disciplinary action in the State of Maryland under §14-504 of the Act. (See HO §14-504(a)(1) and (3).)

### Conclusions of Law

Based on the foregoing Findings of Fact, the Board concludes the following:

1. The Applicant fraudulently and/or deceptively at-

tempted to obtain a license to practice medicine in the State of Maryland, under *Md. Health Occ. Code Ann.* §14-504(a)(1); and

2. The Applicant was disciplined by a licensing or disciplinary authority ... for an act that would be grounds for disciplinary action under this section, under *Md. Health Occ. Code Ann.* §14-504(a)(21). The underlying grounds actionable under this section include the following:

Fraudulently or deceptively obtains or attempts to obtain a license ... [HO §14-504(a)(1)];

Fraudulently or deceptively uses a license [HO §14-504(a)(2)];

Is guilty of ... unprofessional conduct in the practice of medicine [HO §14-504(a)(3)];

Solicits or advertises in violation of §14-605 of this title [HO §14-504(a)(5)];

Willfully fails to file or record any medical report as required under law, willfully impedes or obstructs the filing or recording of the report, or induces another to fail to file or record the report [HO §14-504(a)(12)]; and

Solicits professional patronage through an agent or other person or profits from the acts of a person who is represented as an agent of the physician [HO §14-504(a)(14)].

Accordingly, the Board has determined that it may deny the application of the Applicant for medical licensure in the State of Maryland, under *Md. Health Occ. Code Ann.* §14-205(a)(1)(iii).

### Order

After reviewing the application of Tati I. Okereke MD for medical licensure in the State of Maryland, it is

this 9th day of January 1991, by an affirmative vote of a majority of the full authorized membership of those members of the Board of Physician Quality Assurance who considered this case,

ORDERED that the application of Tati I. Okereke for medical licensure to practice medicine in the State of Maryland is DENIED, and be it further

ORDERED that this is a FINAL ORDER and as such will be considered a public document pursuant to *Md. State Gov't. Code Ann.* §10-611 *et seq* (1989 Cum. Supp.).

ISRAEL II. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Notice of Right to Appeal

Pursuant to *Md. Health Occ. Code Ann.* §14-508(a), any person aggrieved by a final decision of the Board in a contested case other than a case decided pursuant to *Md. Health Occ. Code Ann.* §14-504 may (1) appeal that decision to the Board of Review; and (2) then take any further appeal allowed by the Administrative Procedure Act.

Any person aggrieved by a final decision of the Board in a contested case in an action under *Md. Health Occ. Code Ann.* §14-504 may not appeal to the Secretary of Board of Review but may take a direct judicial appeal. Please be advised that your appeal from those matters involving §14-205 of the Act is to the Board of Review of the Department of Health and Mental Hygiene; and that you may take a direct judicial appeal from those matters involving §14-504 of the Act.

ISRAEL II. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Music Medicine Clearinghouse Volunteers

The Music Medicine Clearinghouse is looking for volunteers who can give a few hours a week to assist with the collection. Duties would include photocopying, filing, shelving, light typing, light data entry, etc. For further information, contact Susan Harman, Clearinghouse Coordinator, at 301-539-0872 or 1-800-492-1056 toll free in Maryland.

### MED CHI LIBRARY CHARGES

Effective May 1990

	Active Members	Affiliate, Associate, Fellow, and Resident Members
Borrowing from Book Collection	Free	Free
In-house Photocopying	5 articles free each month \$3.00 for each additional article	\$3.00 per article
Interlibrary Loans	\$3.00 per article plus charge from lending library	\$3.00 per article plus charge from lending library
Literature Searching	\$2.00 for each year searched	\$3.00 for each year searched
FAX surcharge	\$5.00 per article	\$5.00 per article



# Continuing...

For over fifteen years, the Med Chi Agency has been serving the needs of Maryland physicians...*your* needs, with unrivaled commitment and dedication. And as the Agency has grown, so has your trust...in us, in our products and in the way we do business with you.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial options. Among these are:



Professional Liability Insurance (Malpractice)



Personal insurance, including homeowners, auto, boat and recreational vehicle coverage and personal umbrella insurance.



Office insurance, including medical equipment, medical records, computer equipment, account receivables, workers compensation, business auto and employee dishonesty



Financial and estate planning, specifically tailored to the medical professional.



Individual and group, life, health and income protection.



Qualified and non-qualified Retirement Planning

## ...A Commitment To Service



**THE MED CHI AGENCY**  
1204 Maryland Avenue  
Baltimore, Md. 21201-5583  
(301) 539-6642  
1-800-543-1262 (in Maryland)  
FAX (301) 752-5421



# COMING OUT OF THE DARK

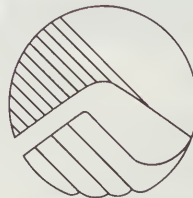
Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians, with a confidential and nondisciplinary focus...Addiction, Marital/Family Conflicts, Psychiatric Illness, Organic Impairment, Physical Handicap...If these problems exist, we can help find the solution. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families.

The Committee is NONDISCIPLINARY and information is kept CONFIDENTIAL. If you, a colleague, or family member is in need of our services call (301)962-5580 or call toll free (800)992-7010, or leave a message 24 hours a day, 7 days a week at (301)727-1020.

*HELPING IS OUR BUSINESS...All donations to the Physician Rehabilitation Committee are used for the delivery of services to Maryland physicians in need of help. If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation, 1204 Maryland Avenue, Baltimore, Maryland 21201 Please note on your donation: "Physician Rehab"*

Medical  
and Chirurgical Faculty  
of Maryland



**Physician  
Rehabilitation  
Committee**



## How Richard Gundry Came to Maryland

Both Cordell's *Medical Annals* and Kelly's *Medical Biography* suggest that Dr. Richard Gundry came to Maryland as a result of party politics, though until now there has been little documentation of that fact. In 1989, as part of an ongoing effort to document the role of the Faculty in Maryland medicine, the History of Medicine Collection acquired twenty boxes of personal and professional papers of Richard Gundry (1830 - 1890). Located within was a letter from the Trustees of an Ohio hospital confirming the report of Cordell and explaining in no uncertain terms just why Gundry was replaced.

Not a great deal is known of Gundry's early years. We do know that he was born in 1830 in England, the son of a minister. It was after his father received an assignment in Canada that the future physician's history becomes a bit more firm. At first, young Richard Gundry took a job as a copyist for a local law firm. At this time, Gundry was still considering a career at the bar. This changed when, upon the suggestion of a coworker, he applied to the Harvard Medical School and was accepted. In 1855, Gundry graduated with the coveted first prize.

Gundry followed graduation with the requisite Grand Tour of Europe without which no nineteenth century college graduate could truly claim to be educated. It was on the return trip that fate, in the form of a cholera outbreak on board ship, took a hand in Gundry's life. As the only physician on board, other than the ship's doctor, Gundry's fellow travellers quickly became his patients. Gundry so impressed one of the passengers with his skill that once the ship had passed out of quarantine, the former patient suggested Gundry go with him to Ohio rather than returning to Boston as had been Gundry's original plan.

Upon arrival in Ohio, Gundry secured an appointment with the Sterling Medical College of Ohio as Demonstrator of Anatomy. Gundry's first appointment in the field which was to dominate his life, care of the mentally ill, was followed quickly with a temporary appointment as Assistant Physician in the Central Insane Asylum at Columbus, Ohio. "His fitness for the work was so apparent," according to one biographer, "that the temporary appointment soon became a permanent one."<sup>1</sup>

1857 saw Gundry's reputation as an "alienist"<sup>2</sup> grow with an appointment as Assistant Physician at the Southern Ohio Asylum in Dayton. This position rapidly gave way to a new appointment as Superintendent in 1861. This, in turn, was followed by a return to the Central Insane Asylum in Columbus as Director of the Hospital.<sup>2</sup>

Unfortunately for Gundry, his term as Director was to be short-lived. The election year of 1876 / 77, which elevated Republican Rutherford B. Hayes to the White House, brought another Republican, Thomas Young, to the Ohio State House. As the letter below shows, Gundry, an active Democrat, soon fell victim to the



Dr. Richard Gundry

spoils system -- a disease endemic to American politics in the latter part of the 19th century.<sup>3</sup>

Columbus, Ohio  
April 18, 1878

Dear Sir:

To prevent the misinterpretation of the appointment of Dr. Ellesbery to succeed you as Superintendent of the Columbus Asylum for the Insane, it is proper to state the only reason for this change.

In Ohio, both political parties have always placed the benevolent institutions of this State under the superintendence of persons belonging to the party in power. In pursuance of that policy, Dr. Ellesbery has been appointed.

It affords us pleasure to bear testimony to your unsullied character, to your great administrative abilities, and your superior skills as a Specialist in nervous diseases.

We beg you, dear sir, to accept the assurance of our personal esteem, and our best wishes for the happiness of yourself and family.

With sincere respects, we remain your very obedient servants.

K.J. Blo[umos]  
David W. Brooks  
G.W. Morgan  
Joseph P. Smith  
Ben Myers, M.D.  
Trustees, Columbus Asylum for the Insane

Since he was active in local politics, Gundry was doubtlessly familiar with this practice. Still, in the words of Henry Hurd, he was "dumbstruck" by this

blow to his career. Gundry began searching almost immediately for a new position and after only a short six-month search was offered the job of Superintendent at the Maryland Hospital for the Insane in Catonsville.<sup>4</sup> This decision by the Trustees of the Maryland Hospital proved to be a wise one for all concerned, but particularly for the patients. Gundry had long ago accepted a method of care which advocated freedom of movement and lack of restraints. He quickly began to implement these ideas at his new hospital.

Gundry quickly came to be respected by his professional peers in Maryland and was soon appointed Professor (1880) of "Mental and Nervous Diseases" and "Materia Medica" at the College of Physicians and Surgeons. He also became a member of the Medical and Chirurgical Faculty of Maryland that same year.

Gundry was a prolific author and a frequent contributor to the *Transactions of the Medical and Chirurgical Faculty of Maryland*, contributing such works as: "Some Problems of Mental Action" and "The Physical Manifestations of Disease" in 1881 and "The Relation of the Powers of the State to the Rights of the Individual in Matters Concerning Public Health" in 1883. Gundry was appointed to several Faculty Committees, most notably on a committee created to persuade the Maryland State Legislature to create a law providing for the care of the "feeble minded" children of Maryland.<sup>5</sup>

Gundry remained an active member of the Maryland

medical community, continuing as Director of the Hospital in Catonsville and maintaining a thriving practice until his death in 1890 of Bright's disease.

The materials donated to the Faculty include both personal and professional papers, including twelve bound notebooks of lectures and formulas, case records, and professional correspondence (1855-1889); books; certificates; and stereocards. In addition, there are three files of correspondence from Richard Gundry, Jr MD and Rachel Gundry MD.

### Notes

1. Hurd, Henry. *Institutional Care of the Insane*, "Biography of Richard Gundry," Baltimore: Johns Hopkins University, 1916.

2. A term popular among nineteenth and early twentieth century medical men, "Alienist" usually referred to someone who specialized in "nervous diseases." A good introduction to late 19th century psychiatry can be found in Brieger, Gert (ed). *Medical America in the Nineteenth Century: Readings from the Literature*. Baltimore: Johns Hopkins Press, 1972.

3. Papers of Richard Gundry MD Archives - The Medical and Chirurgical Faculty of Maryland, The History of Medicine Collection.

4. Cordell, Eugene (ed). *The Medical Annals of Maryland, 1799-1899*. Baltimore. 1903:202-203, 212.

5. Hurd, Henry. "Biography of Richard Gundry." *Institutional Care...* and Cordell, *Medical Annals*. p. 214.

WILLIAM SLEEMAN

Archivist

Medical and Chirurgical Faculty of Maryland

## Component Society News

### Homewood Hospital Medical Staff Funds Scholarship

The Baltimore City Medical Society Foundation, Inc., has received \$75,000 as the first part of an endowment to establish a scholarship program in the name of the medical staffs of the North Charles General Hospital and the Wyman Park Medical Associates. At the closing of Homewood Hospital, the medical staff voted to give all of the funds left in its treasury to the BCMS Foundation, Inc. to fund a scholarship for a medical student from the State of Maryland. The first check presented to Dr. Beryl Rosenstein, President of the Foundation, was the bulk of the funds, but an additional amount will be forwarded when all bills have been paid by the medical staff office. It is expected that as much as another \$9,000 will be added to the initial contribution, bringing the endowment to \$84,000.

Scholarships in the name of "The Medical Staff of North Charles General Hospital and The Wyman Park

Medical Associates" will be awarded annually from the interest earned on the endowment. In accordance with the wishes of the medical staffs, scholarship recipients must be Maryland residents attending either the University of Maryland or The Johns Hopkins Medical Schools. The first award will be made in May 1992.

The Baltimore City Medical Society Foundation, Inc. was established in 1972 to support philanthropic activities in Baltimore and provide scholarships to medical school students. Prior to this gift, most of the funds available to the Foundation have been contributed by individual members of the Baltimore City Medical Society and their friends and families. The generous contribution from the medical staffs of North Charles General and Wyman Park Medical Associates will almost double the amount of money available each year for the scholarships.



### Liver Resections

Small lesions of the left lobe of the liver or drainage of simple cysts can be handled through a midline upper abdominal incision, but for most other major liver resections, I prefer a subcostal incision. This can be extended as a bucket handle incision to the left (i.e., by angling down parallel to the left subcostal region, or further to the right into the flank, or across for right thoracic extension). The abdomen should be diligently explored for evidence of other malignancy, infection, or metastasis. The nature and extent of the disease in the liver must be carefully assessed and the rest of the liver evaluated.

Intra-operative ultrasound has added to our diagnostic ability. This is in addition to palpating the normal appearing liver to rule out further metastasis. Needle core or wedge biopsy will often be useful to confirm the diagnosis before any major resection is undertaken. If resection is still being considered at this point, liver mobilization is indicated. Some lesions require little mobilization and others require almost complete dissection of all peritoneal attachments on one or both lobes. This may include division of the falciform ligament back to the inferior vena cava. The right or left triangular ligaments are severed, as well as the peritoneum on the right side of the inferior vena cava (for further mobilization of the right lobe of the liver). Such mobilization allows rotation of the liver to further evaluate it for resectability.

Evaluation of the gross characteristics of a lesion, biopsy when indicated, and mobilization sufficient to allow evaluation of resectability should be done without blood loss or the burning of bridges. Now is a good time to pause to make a final decision about resectability. If major resection is planned, the anesthesia team should be informed and the circulating nurse asked to contact the blood bank for readiness.

Simple cysts should have wide marsupialization by resection of a window of exposed capsule. The interior lining should be explored for epithelial patches suspicious of cystadenoma and for loculation. If continuous drainage is noted, such cysts can be drained to the outside or internally via a Roux-Y. If the cyst contains bile, one should attempt cystography and biopsy to look for connections with the bile ducts. Small focal nodular hyperplasia tumors will be totally excised for biopsy. However, if the diagnosis is made by incisional biopsy of a large centrally located nodular hyperplasia, it may be safer to leave such a lesion than to resect it. Symptomatic hemangiomas and large adenomas should be enucleated. If such lesions are large, preliminary hilar control should be carried out. Unresectable large adenomas can be managed by embolization.

Primary and secondary cancers should be resected with a margin of normal liver tissue. Small peripheral lesions are best resected by wedge excision. I have

carried out multiple wedge resections for metastatic lesions from large bowel cancer to both lobes of the liver. However, benefit was noted in those patients who have had one to three metastases. Large and centrally located lesions are best handled by anatomic dissections. *Segmental* resections are carried out for right lobe, left lobe, or centrally located lesions. Such limited resections are undoubtedly necessary to preserve function, especially in patients with cirrhosis. *Sublobar* resections can be carried out for the same reasons, but for somewhat bigger lesions. However, such an approach results in more blood loss than in a lobectomy. *Lobectomies* can be done more rapidly and safely. A line drawn from the bed of the gallbladder to the inferior vena cava separates the right lobe from the left lobe. The falciform ligament lies in the left lobe and separates the medial segment from the lateral segment of the left lobe of the liver. *Extended lobectomy* indicates the resection of one of the two lobes in addition to the resection of a neighboring segment. One should keep in mind that the remaining segment should maintain good hepatic artery and portal vein inflow, as well as hepatic vein outflow.

For all major liver resections, hilar dissection should be carried out first (i.e., prior to resection). The branches of the hepatic artery, portal vein, and biliary duct (at resection side) are ligated after dividing and ligating the cystic duct and removing the gallbladder separately or on the specimen side. This usually results in demarcating the site of resection. Glisson's capsule is severed by blade or scissors, the liver is dissected by the finger technique or blunt instrument, and the major vessels and ducts ligated. Finally, the hepatic vein or veins are dissected inside the liver, suture ligated, and severed as far as possible from the inferior vena cava.

*Postoperative care.* Recovery from cyst drainage or wedge resection parallels that after uncomplicated cholecystectomy. Recovery from a major resection depends on several factors:

1. Thoracic extension of the incision may lead to pulmonary complications.
2. Hepatocellular insufficiency due to cirrhosis or intraoperative technical problems may cause difficulties. Massive blood transfusion and hypotension during surgery may lead to hypothermia, coagulopathy, acute respiratory distress syndrome, and liver and renal failure. Hyperbilirubinemia may occur secondary to hemolysis of transfused blood rather than due to liver failure or bile duct injury. However, persistent jaundice, particularly with a direct bilirubin of more than 2.0 mgm/dl, should prompt concern for bile duct obstruction.
3. Serum albumin drops precipitously after major resection but begins to stabilize by the fifth or sixth postoperative day. Late complications may include:

bile leak and collection which is managed by continued drainage; and abscess formation related to dead space, hematoma, or an infarcted edge of the liver which is managed by radiological or operative drainage.

Most deaths associated with major liver resection are attributed to failure to control hemorrhage or to poor patient selection. The patient's welfare is also intimately connected with the technical competence and the experience of the surgeon.

**E. GEORGE ELIAS MD, PhD**  
Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland

*Tumor conferences are held weekly on Tuesday between 8 and 9 am in Room NBW 75 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call 301-328-5224 by noon Monday to be placed on the schedule: Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD.* ■

# Desirable Medical Suite

AVAILABLE FOR LEASE  
ANNE ARUNDEL COUNTY, MD

2100 square feet located at a busy intersection of Route 175 in established Community Shopping Center currently serving over 18,000 families in the immediate vicinity of Severn and Odenton, Maryland. Dynamic growth taking place at this prime location. Space is equipped with x-ray room, lab rooms, examining rooms, etc. Ready for immediate occupancy. Call **(301) 821-1935**



**DONALD H. READY**  
COMMERCIAL REAL ESTATE

306 W. PENNSYLVANIA AVE. / TOWSON, MD 21204

## Speak Out on Consultation

Consultation, a radio program sponsored by the Medical and Chirurgical Faculty of Maryland allows Med Chi physicians to appear each week on the program to discuss the latest developments in medicine and to answer questions about health issues. Med Chi currently airs two sessions of Consultation:

### Saturday Evening Consultation

A live program  
Saturday from 5:00 to 6:00 p.m. and 6:00 to 7:00 p.m.  
Broadcast across the country  
An hour-long program  
Call-in format: Physician answers questions from listeners

### Sunday Morning Consultation

A pre-taped program  
Sunday at 7:30 a.m.  
Broadcast on WBAL - AM radio  
A half-hour program  
Interview format: one-on-one talk with John Stupak

**Med Chi encourages all physicians to appear on these innovative programs. To register fill in the form below.**  
**Yes, I am interested in speaking on Consultation. Please contact me with scheduling information.**

Name \_\_\_\_\_ Address \_\_\_\_\_  
Phone \_\_\_\_\_ Specialty \_\_\_\_\_

Return this form to: Betsy Newman, Med Chi, 1211 Cathedral Street, Baltimore, MD 21201.  
For more information contact Betsy Newman at 301-539-0872 or in Maryland 1-800-492-1056.



## Auxiliary

### Vivian Reed Lynn: State Auxiliary President

**V**ivian Reed Lynn is the 1991-92 President of the Auxiliary to the Medical and Chirurgical Faculty of Maryland. She is the fourth State President from Prince George's County.

Mrs. Lynn was born in Kentucky and is a graduate of the Jewish Hospital School of Nursing in Cincinnati, Ohio. After receiving her RN, she continued her studies in liberal arts at the University of Cincinnati. She worked in the medical-surgical unit of Jewish Hospital and then became head nurse of the emergency room at William Booth Hospital in Covington, Kentucky. After moving to the Washington area in 1970, she worked as an operating room nurse at Cafritz Hospital in southeast Washington, DC and then at Sibley Hospital in northwest Washington. Mrs. Lynn left nursing in 1978 when her daughter, Andrea, was born. Andrea is now a seventh grader at Queen Anne School in Upper Marlboro.

Her husband, Dr. John T. Lynn, is a Board Certified Orthopaedic Surgeon whose practice is located primarily in Prince George's County. Dr. Lynn is a cofounder of Prince George's Orthopaedic Associates, a ten-member corporation of orthopaedic surgeons. He received his BA degree from Lehigh University and his medical degree from Jefferson Medical College in Philadelphia. Five years in family practice in Prince George's County was followed by a four-year orthopaedic residency under the Jefferson program at Philadelphia General Hospital. He is a past president of the Prince George's County Medical Society and the Metropolitan Washington Orthopaedic Society. Governor Schaefer recently reappointed him to a three-year director's term on the Maryland Board of Physician Quality Assurance (BPQA), the licensing and disciplinary commission for physicians and other paramedical personnel serving the citizens of Maryland.

Mrs. Lynn has been active in the Prince George's County Auxiliary since joining in 1978. She held the office of County President for two years, 1987-89. She was then elected Second Vice President in the State Auxiliary.

"Renew the Spirit" is the Auxiliary President's theme for the year 1991-92. She will emphasize a renewed dedication to the Auxiliary, its goals, and its work in Maryland. Mrs. Lynn's membership campaign will include the theme "Each One-Reach One." She feels that each member should be involved with membership by having personal contact with at least one prospective member, explaining to him or her the goals and purposes of the Auxiliary.

The Auxiliary will continue to work closely with the Medical and Chirurgical Faculty in legislative matters and continue to sponsor such activities as *Auxiliary's Day* in Annapolis, to help strengthen the medical com-



Vivian Reed Lynn

munity's relationship with the Legislature. A workshop on breast cancer awareness and education is planned for the Fall House of Delegates Meeting. Mrs. Lynn would like this health project to be carried out in all the county auxiliaries so that all auxiliary members are knowledgeable about mammography and self-examination for early detection of breast cancer.

Mrs. Lynn is very active in her community. She has been a volunteer for the Hospice of Prince George's County for five years. She is also active in her church, having served on the joint board as an elder, singing in the choir, and directing the youth group. She also served on the Pastoral Counseling Board of Greater Marlboro for six years. Mrs. Lynn has been a member of the Maryland Choral Society for two years and is active in her daughter's school. Her leisure time activities include aerobics, golf, needlework, and listening to classical music.

Mrs. Lynn feels that "Renewing the Spirit" of the Auxiliary will strengthen the organization and help to increase the membership, as well as enhance its dedication to its goals and purposes as partners in the health community. ■

### TAX-DEFERRED ANNUITIES\*

- Competitive rates of interest
- Tax-deferred interest until withdrawn
- Safety of investments
- Access to income
- Rate guarantees for 1-3-5 years

**CALL TODAY!**

### You Need More Security Than Social Security...



INVESTMENTS OFFERED AT  
**REISTERSTOWN FEDERAL SAVINGS BANK**  
Through Time Financial Services, Inc.

CALL KATHY WALDER or  
LAURA WORM  
at 833-2693, EXT. 221 or 220

### LONG-TERM HEALTH CARE\*

- Flexible coverage
- Guaranteed renewable
- Inflation protection available
- Lifetime benefit options
- Protection for Alzheimer's disease

**CALL TODAY!**

\* Contracts are protected by the legal reserves of the issuing insurance company and are not FDIC insured.



## PROFESSIONAL COMPOUNDING CENTER OF BALTIMORE (Kaye's AID Pharmacy)

DAVID B. LIEBMAN, R.Ph.  
Compounding Pharmacist

6913 Belair Road  
Baltimore, MD 21206

**We Make Medicines  
for Your Patients' Special Needs**

**We ship anywhere  
by UPS FAST SERVICE**

**ABSOLUTELY no cost to the Physician**

**DOCTOR, WHAT CAN WE MAKE FOR YOU?**

**Call or Fax us today!**  
**(301) 665-5192 • Fax 301-668-8533**  
**Toll free 1-800-673-8277**

### THE MAGNIFICENT SEVEN ARE AT YOUR SERVICE.



**T**he seven PSA Financial affiliated companies are specialists, each in its own sphere of operation. Individually and in combination, they provide financial services, risk management and investment counseling to the medical profession, and over the years have gained recognition as outstanding performers in their several fields.

Contact any of our affiliates to enjoy the satisfaction and sense of security that comes from having probably the best financial service specialists in the business on your side.

Planning for our  
Clients Financial Future  
Since 1928.



**PSA Financial Center**  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

**PSA Professional Liability, Inc.**  
Malpractice Insurance

**PSA Financial, Inc.**  
Employee Benefits

**PSA Financial Advisors, Inc.**  
Financial Planning

**PSA Capital Management, Inc.**  
Investment Management

**PSA Pension Services, Inc.**  
Design & Administration

**PSA Insurance, Inc.**  
Agents & Brokers

**PSA Equities, Inc.**  
Broker / Dealer



# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.



*Lumbar Spine*

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)

# Succeed In The 90's With

# SMART C·H·A·R·T

## Computerized Medical Records

Did you know that most doctors spend about 40% of their time recording and trying to decipher patient histories from traditional Medical Charts?

Smart Chart's unique software package affords quick and easy access to medical records.

By using Smart Chart, you will have more time to...

- See patients
- Conduct research
- Enjoy yourself!

Call Smart Chart, Inc. today and see how easy it is to *Succeed in the 90's with Smart Chart!*

MAIL OR FAX THIS COUPON TO:

Smart Chart, Inc.

11212 Grandview Avenue, Suite 108

Wheaton, Maryland 20902

1-800-783-7825

301-946-7825 (Metro. D.C.)

Fax 301-762-2831

YES! I am interested in Smart Chart.

Name \_\_\_\_\_

Company \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

## BOOK REVIEW BOOK REVIEW

*Infection Control in the Child Care Center and Pre-School.* Editor: Leigh G. Donowitz MD. Baltimore: Williams & Wilkins, 1991. 364 pages. \$26.00

As stated by the editor, the purpose of this book is to "provide childcare center and pre-school administrators, pediatricians and public health officers with a current and easy-to-read reference on common infection control issues in daycare." The list of contributors is impressive and their expertise cannot be disputed.

Sections I and II comprise fourteen pages of information on the transmission of diseases and the policies to be used by daycare personnel in the prevention of disease and/or recognition of sick children. Section III deals with the care of high-risk children, ranging from changing diapers to the role of polymorphonuclear cells in combating infection. Section IV is devoted to guidelines for the control of isolated and epidemic infections, first in a general way and then, by providing instructions for managing specific infections. A list of signs and symptoms for each illness to be given parents to assist in identifying illness in their child is provided. The content of the last section -- the largest at 219 pages -- is probably aimed at physicians and contains thumbnail sketches of fifty-three specific diseases.

Despite the impressive list of contributors, this book suffers from attempting to do too much. As a result, it seemed less than adequate to meet the needs of the large, diverse audience for which it is intended.

FRED J. HELDRICH MD

Reviewer

We invite your comments as well as scientific articles.

Write: *Letters to the Editor and Commentary*

MMJ, 1211 Cathedral St.

Baltimore, MD 21201-5585

### Hotline Numbers for Impaired Professionals

Physicians -- 727-0120

Dentists -- 964-2275

Attorneys -- 685-7878

Pharmacists -- 727-0746

Emergency Psychiatric Beds  
800-492-0610



## MEDICAL MISCELLANY MEDICAL

### Med Chi's Second Annual Conference on Addiction and Physician Health

**D**rug-related tragedies crowd local and national news broadcasts. Drug problems afflict both sexes and all races, religions, and professions. As health care professionals, we bear responsibility for the health of our community, state, and nation. Yet, only thoroughly educated professionals can effectively treat addictive disorders.

To fulfill the educational needs of health care professionals, Med Chi's Physician Rehabilitation Committee and Committee on Alcoholism and Chemical Dependency are sponsoring the Second Annual Conference on Addiction and Physician Health on Saturday, November 16, 1991 at the Med Chi Faculty Building. Conference topics will include:

#### *Substance Abuse Topics*

- How to help patients stop smoking
- The role of the primary care physician in the treatment of chemical dependence
- Adolescent chemical dependence
- Assessment and treatment of alcoholism in various age groups

#### *Physician Health Topics*

- Primary impairment prevention for medical students
- The impaired physician
- Urine drug-testing for physicians and other health care providers

#### *Addictive Behaviors Other Than Substance Abuse*

- Sexual exploitation of patients and treatment of sexual addiction
- Utilizing a traditional addiction treatment approach in the treatment of eating disorders

Registration will be \$50 for Med Chi members, \$75 for nonmembers, and \$25 for residents, medical students, nurses and other health professionals. Registration fees include breakfast, lunch, and breaks. For registration information, please call Vivian Smith at (301)539-0872 or toll-free in Maryland at (800)492-1056. ■



Physicians filled the auditorium to capacity at the First Annual Conference on Addiction and Physician Health.

## AUTHOR INFORMATION AUTHOR

**M**anuscripts may be sent to Editor, *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a WordPerfect or ASCII format.

Include full name of author(s) with highest degrees and academic or professional titles.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

An introductory synopsis of approximately 25 to 50 words is required.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles. Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the *Uniform Requirements for Manuscripts Submitted to Biomedical Journals* compiled by the International Committee on Medical Journal Editors (available through the *Annals of Internal Medicine*).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in *MMJ* is protected by copyright and may not be reproduced without the written permission of both the principal author and *MMJ*. ■ ■ ■

Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset. ■

**THE JOHNS  
HOPKINS  
MEDICAL  
INSTITUTIONS**

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-2959) or call the phone number listed after a specific program.

<b>September 12-13</b>	<b>Pediatrics for the Practitioner - Update 1991.</b> 14.5 Cat 1 AMA/PRA credits. Fee: \$250 physicians; \$160 residents, retired physicians, and allied health professionals.
<b>September 21</b>	<b>Perioperative Management of the Patient with Ischemic Heart Disease,</b> at the Sheraton Inner Harbor Hotel, Baltimore, MD. 4.5 Cat 1 AMA/PRA credits. Fee: \$40 physicians; \$25 residents, fellows, CRNAs and allied health professionals.
<b>October 4-5</b>	<b>Asthma, Allergy and Immunology,</b> at the Sheraton Towson Conference Hotel, Baltimore, MD. MNA credit is pending. Fee: \$125 one day; \$225 two days.
<b>October 7-9</b>	<b>Toxicology Update '91: Concepts and Advances in Immunotoxicology.</b> Info: Dr. Jacqueline Corn or Catherine Walsh, 301-955-2609.
<b>October 14-19</b>	<b>33rd Annual Emil Novak Memorial Course on Gynecology, Gynecological Pathology, Endocrinology, and High-risk Obstetrics.</b> Cat 1 AMA/PRA credits and ACOG cognates available. Fee: \$650 physicians; \$450 residents, fellows and allied health professionals.
<b>October 24-30</b>	<b>5th Annual Postgraduate Course -- Core Content of Emergency Medicine: A Comprehensive Review,</b> at the Marriott Hotel, BWI Airport, Baltimore, MD. Cat 1 AMA/PRA credits and ACOG cognates available. Fee: Before 9/15/91 \$950 physicians, \$850 residents; After 9/15/91 \$1,050 physicians, \$950 residents.
<b>October 25</b>	<b>Anxiety Disorders: A Diagnostic Challenge to Psychiatry and Medicine in the 1990s.</b> 6 Cat 1 AMA/PRA credits. Fee: \$50 physicians; \$40 residents, fellows and allied health professionals.
<b>November 1-2</b>	<b>Progress in Pediatrics.</b> 11 Cat 1 AMA/PRA credits. Fee: \$140 physicians; \$85 residents, fellows and nurse practitioners.
<b>November 2-3</b>	<b>Hemodynamic Monitoring, Patient Care and Pulmonary Artery Catheterization - A Hands-on Course.</b> 14 Cat 1 AMA/PRA credits. Fee: \$550.
<b>November 8</b>	<b>Update on Sinusitis for the Practitioner.</b> 9 Cat 1 AMA/PRA credits. Fee: \$150 physicians; \$80 residents, fellows, and allied health professionals.
<b>November 15</b>	<b>Management of Diabetic Retinopathy: Application of Guidelines from 1991 ETDRS Publications.</b> 8 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents, fellows, and allied health professionals.
<b>Continuously Throughout the Year</b>	<p><b>Visiting Preceptorship in Pediatric Critical Care Medicine.</b> Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600.</p> <p><b>Ophthalmic Electrophysiology Technician Training Course.</b> Ongoing one-week course by appointment. The Wilmer Eye Institute, Baltimore, MD.</p> <p><b>Ophthalmology Grand Rounds.</b> Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. Thursdays, 7:30-9:00 am. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700.</p> <p><b>Neuro-ophthalmology Conference.</b> Held twice per month. Info: 301-955-5700.</p> <p><b>Cornea Conference.</b> Held monthly. Info: 301-955-5700.</p> <p><b>The Department of Radiology and Radiological Sciences</b> offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.</p> <p><b>Visiting Physicians.</b> Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.</p> <p><b>Johns Hopkins Medical Grand Rounds.</b> Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.</p> <p><b>Microsurgery Training at The Johns Hopkins Hospital.</b> One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.</p>



**UNIVERSITY OF  
MARYLAND  
SCHOOL OF  
MEDICINE**

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

**September 6**

**Current Concepts in Ophthalmology: 11th Annual Clinical Conference**, at the Columbia Inn, Columbia, MD. 6 Cat 1 AMA/PRA credits. Fee: \$75.

**September 12**

**Mechanisms and Management of Somatosensory Disorders of the Facial Region**, in Chemical Auditorium, Davidge Hall, 522 West Lombard St., Baltimore, MD. Fee: \$150 doctors; \$50 postdoctoral trainees; \$30 students. Info: 301-685-2768

**October 4-5**

**Medical Consultation and Management in the Perioperative Period**, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Lorraine Zaganas, 301-328-6598.

**October 4-6**

**Seventh Annual Maryland Contact Lens Symposium**, at the Turf Valley Hotel and Country Club, Ellicott City, MD. 12 Cat 1 AMA/PRA credits. Fee: \$165.

**November 8**

**Controversies in Pharmacology and the Elderly**, at the Omni International Hotel, Baltimore, MD. Credits and fee to be determined.

**Continuously  
Throughout the Year**

**Visiting Professor Program** - A new 1991-1992 directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.



## PHYSICIAN'S RECOGNITION AWARD

### Recipients

During June 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Abraham, Palma  
Agazadeh-Naini, Reza  
Allman, Robert Mayer  
Badder, Elliott Michael  
Barrett, Andrew Marvin  
Berger, Bruce Warren  
Bianchi, David Alan  
Biddison, James Horace  
Brown, Patricia Church  
Calabrese, Anthony Joseph  
Camp, Turner  
Chang, Yu Wen  
Chernow, Bart  
Cohen, Sheldon Gilbert  
Cohen, Stephen Peter  
Cole, Martha Toma  
Connolly, John William

Crawford, Jennifer J.  
Del Rosario, Rolando F.  
Desi, Laurence  
Duarte, Cristobal Gabriel  
Elma, Bayani Borja  
Epstein, Edwin Stuart  
Felstenthal, Gerald  
Gallager, Wilmer K.  
Galotto, John Anthony  
Gelpi, Jose Angel  
Hakkarinen, William  
Hexter, David Andrew  
Idriss, Ziad Hassan  
Jani, Niranjan Natwerlal  
Jaskulsky, Steven Ray  
Kitzman, Dalane William  
Kramer, Morton David

Levin, Sondra Warren  
Linder, Lawrence Scott  
Lustbader, Jay Mark  
March, Mollyann Green  
McGovern, Kevin Edward  
Mock, Joseph Phillips  
Mondino, Jorge A.  
Mosenkis, Mikhail  
Nandipati, Sivarama K.  
Radin, Arthur Irwin  
Radkowsky, Allen K.  
Rose, Philip David  
Rosenblum, Jeri Shuster  
Rubin, Seymour H.  
Sabatier, Henry S.  
Sauri, Michael Anthony  
Scarzella, Giulio Italo

Scott, Nathan A.  
Shackman, Albert Bernard  
Sharoky, Melvin  
Shoemaker, Ritchie C.  
Shore, David  
Suresh, Keelapandal R.  
Vorosmarti, James  
Wilkinson, David S.  
Williams, Peter Welles  
Wolff, Stewart MacKay  
York, James Joseph  
Yousaf, Shaheer  
Yuschak, James Victor  
Zern, Ruthann Theresa

## MISCELLANEOUS MEETINGS

- September 13-14** **Nutrition Support in the Cancer Patient**, sponsored by the Maryland Society for Parenteral Enteral Nutrition, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Cat 1 AMA/PRA credits available. Fee: \$10 members; \$20 nonmembers. Info: B. Pharoan MD, 301-661-9300.
- September 14** **Issues in Cancer Prevention and Wellness for the Family Physician**, sponsored by the Maryland Academy of Family Physicians, at the Holiday Inn Hotel and Conference Center, Annapolis, MD. 5.75 Cat 1 AMA/PRA credits; 5.75 AAFP prescribed hours. Fee: \$55 MAFP members; \$80 nonmembers; \$35 paramedicals; no charge for residents, students, and retired and life members of MAFP. Info: William P. Jones MD, 301-747-1980.
- September 14-15** **Boardwalk Board Review**, sponsored by the Maryland Chapter of the American College of Surgeons, at the Sheraton Ocean City Resort, Ocean City, MD. AMA/PRA credits available. Info: F.W. Walker MD, 301-836-0909.
- September 19-20** **3rd Annual Trauma Conference**, sponsored by the Peninsula General Hospital Medical Center at the Carousel Hotel and Resort, Ocean City, MD. 12 Cat 1 AMA/PRA credits. Info: Darlene Kwiatkowski, 301-543-7328.
- September 21** **Current Controversies in Prostate Carcinoma**, sponsored by the Greater Baltimore Medical Center's Department of Radiation Oncology at GBMC, Towson, MD. Info: 301-828-2549.
- October 18** **Arthritis Care for the 1990s: A Practical Approach for the Primary Care Physician**, sponsored by the Maryland Chapter of the Arthritis Foundation, at Loews Annapolis Hotel, Annapolis, MD. AMA/PRA credits available. Fee: \$40; \$30 if not requesting CMEs. Info: Karen Krug, 301-561-8090.
- October 21-22** **5th Annual National Disability Management Conference**, sponsored by the Washington Business Group on Health (WBGH), at the Crystal Gateway Marriott in Arlington, VA. Fee: \$375 WBGH members; \$450 nonmembers. Info: Heather Patterson, 202-408-9320.
- October 24-26** **18th Anniversary: New Techniques and Concepts in Cardiology**, sponsored by the American College of Cardiology, at the Hyatt Regency Hotel, Washington, DC. Info: 301-897-2695.
- October 25-27** **3rd Annual Infectious Disease Review Course**, sponsored by the Center for Bio-medical Communication in cooperation with the Clinical Center of NIH, at the Crowne Plaza Hotel, Rockville, MD. 18.75 Cat 1 AMA/PRA credits. Fee: \$485 physicians; \$395 physicians-in-training and allied health professionals. Info: Svetlana Lisanti, 201-385-8080.

**Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.**

- |                     |  |
|---------------------|--|
| <b>September 5</b>  | <b>Acute Pain Management</b>                                 |
| <b>September 12</b> | <b>Osteoporosis: Update for the 90s</b>                      |
| <b>September 19</b> | <b>New Assisted Reproductive Technologies</b>                |
| <b>September 26</b> | <b>Investigation of Child Abuse (A Panel Discussion)</b>     |
| <b>October 3</b>    | <b>Update on Therapeutic Advances in Hepatitis C</b>         |
| <b>October 10</b>   | <b>Functional Endoscopic Sinus Surgery</b>                   |
| <b>October 24</b>   | <b>Frozen Section Diagnosis</b>                              |
| <b>October 31</b>   | <b>Anxiety</b>   |
| <b>November 7</b>   | <b>Medical Malpractice Update</b>                            |
| <b>November 14</b>  | <b>New Strategies in the Therapy of Rheumatoid Arthritis</b> |
| <b>November 21</b>  | <b>Irritable Bowel Syndrome</b>                              |

**American College of Emergency Physicians, 1211 Cathedral Street, Baltimore, MD. Info: 301-727-2237.**

- |                     |  |
|---------------------|--|
| <b>September 5</b>  | <b>Board of Directors Meeting</b>                  |
| <b>September 21</b> | <b>Oral Board Preparation and Private Tutorial</b> |
| <b>October 17</b>   | <b>Executive Committee Meeting</b>                 |



Dear Carl,  
Congratulations on your new medical staff leadership position! Now you're not only a physician — you need to be a manager, negotiator, arbitrator, and even a parliamentarian. I wish I had received some special training when I first took a position like yours!

Sincerely,  
Helen

## Do you have the skills to do the job?

Chief-of-staff. Department chairman. Committee chair. Tough jobs, but somebody has to do them — sometimes even with no formal training and little leadership experience.

Now, through a new American Medical Association training program, you can sharpen the skills you need to face the challenges of leadership with confidence and authority.

### **Interactions: A Medical Staff Leadership Program**

This intensive day-and-a-half program will help sharpen your ability to:

- Resolve conflict among peers
- Negotiate with the board and administration
- Manage medical staff affairs
- Develop bylaws that enhance staff effectiveness
- Run meetings effectively and purposefully

### **Learn from the Experienced**

*Interactions* was developed by experts in medical staff leadership and field tested by more than 100 medical staff leaders nationwide. The faculty includes experienced physician leaders as well as management and legal experts. Program features lectures, discussions, and break-out sessions on all aspects of medical staff leadership.

### **Take the Challenge**

If you have recently been chosen for an important leadership position — chief of staff, department chairman, committee chair, or another key post — *Interactions* will develop the skills and confidence to succeed in your new role.

Choose the dates and location that are best for you.

September 6-7, 1991

October 18-19, 1991

Seattle, Washington

Boston, Massachusetts

**Sign up today!**

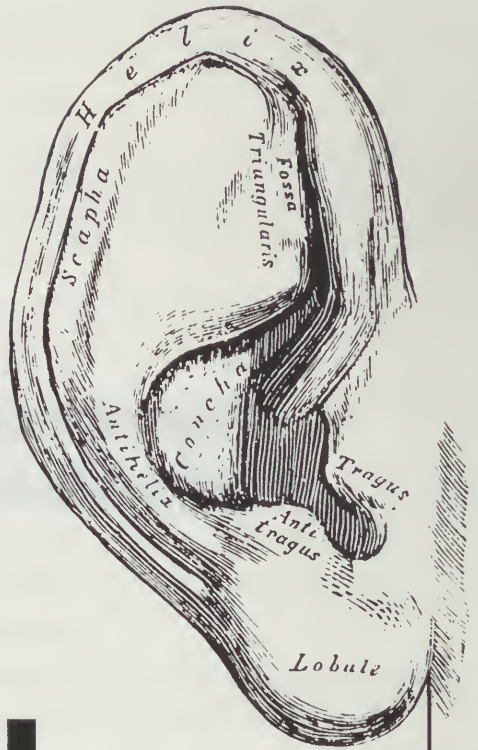


**TO REGISTER, CALL 1-800-621-8335**

MasterCard, Visa, American Express or Optima

AMA members \$395 Non-members \$495 CF 030091

# We're listening!



Med Chi's new publication, *Physician's Practice Digest*, covers financial management tips...office management....new laws and regulations...insurance issues...computer news...lifestyle ideas...and more!

We want to address the issues you want to hear about. If you have ideas for topics to be covered or would like to submit an article, write to Editor, *PPD*, 1211 Cathedral Street, Baltimore, MD, 21201.

For subscription or individual issue information, please call 1-800-492-1056 (toll free in MD) or 301-539-0872.

Physician's Practice  
**D I G E S T**  
maryland

Free to Med Chi members.





## Bright Oaks Courtyard

2021 EMMORTON ROAD (RTE. 924) • BEL AIR, MD 21015

### 20,000 Square Ft. Professional Office Buildings

- Easy Access to I-95 & Rt. 24
- Close Proximity to residential & commercial developments
- Customized suites
- HVAC gas, elevators, ample parking
- Competitive rates
- Tenant allowances

**Contact: C.H. Goldberg, MT-(ASCP); CIBN**  
**(301) 893-1800**  
**1-800-437-8558**

Developed by:



ROBERT WARD REALTY INC.

## PHYSICIANS

Do something different  
two days a month

Receive a commission  
in the Army National Guard

*The Army National Guard has immediate openings for physicians which require participation of only 2 days a month plus a 15-day Annual Training Period (a total of 39 days per year).*

### YOU WILL BE ELIGIBLE

- A COMMISSION IN THE ARMY NATIONAL GUARD
- AN EXCELLENT PART-TIME INCOME
- PAID ATTENDANCE AT:
  - CONTINUING MEDICAL EDUCATION COURSES
  - AMA CONFERENCES
  - KPUP (Active duty assignment up to 30 days in Europe, Asia and South America)
  - TRAINING AT U.S. ARMY HOSPITALS
- POST EXCHANGE & COMMISSARY
- MILITARY AIR TRAVEL WITHIN THE 50 STATES

### MARYLAND ARMY NATIONAL GUARD

PHIL HOWARD  
(301) 653-4618

610 Reisterstown Road, Pikesville, MD 21208



## FELLS POINT MEDICAL BUILDING

The FELLS POINT MEDICAL BUILDING will be a 40,000 foot multi-speciality medical building at the corners of Fleet and Central Streets. It is part of the Inner Harbor complex. Occupancy of the building will be late 1992. Leases are available.

Some board certified surgical sub-specialities as well as all medical specialties are needed. A walk-in clinic will be open 18 hours a day-seven days a week.

Serious inquiries only. Contact:

**Lewis B. Newberg, M.D.**  
**(301) 988-9529**  
**FAX: (301) 461-3430**



**TeamCare**  
 Infusion Management Services

TeamCare is a clinically specialized provider of infusion therapy services to long term care facilities, hospitals and patients at home.

From clinical office programs to managed care clients, we offer service intensive programs in pediatrics, oncology infectious diseases and nutritional support.

Baltimore, MD  
(301) 498-8928

Washington, DC  
(301) 989-0300

Tidewater, VA  
(804) 473-0304

Philadelphia, PA  
(215) 938-7390

### INTERNIST

BC/BE Internist wanted to join 2-person group in Baltimore/Washington corridor location. Early Partnership. Begin July 1992. Send CV to Box 11.

### FAMILY PRACTICE

Two female family practice physicians desire a third to join them in active and growing Pasadena, MD practice. Must be Board Certified. Call 255-2700 for further information. Ask for Carla Varnum.

### OB/GYN

Board eligible or certified OB/GYN for abortion procedures needed for Saturdays. Please send your resumé to: Janet Avena, 17 Fontana Lane, Suite 201, Baltimore, MD 21237.

### OPHTHALMOLOGIST

Wanted for Ellicott City office. Equipment provided, flexible terms. Reply to Box 9.

### PART-TIME EMERGENCY MEDICINE

Baltimore/Washington Area. Part-time positions available in highly desirable, moderate volume Emergency Department (28,500 patients in 1990) at Howard County General Hospital. Hospital is located in an attractive community situated between Baltimore and Washington, DC in Columbia, MD. Applicants should be board certified/prepared in emergency medicine or related specialty. Send CV to Paul Emergency Physicians Group, Sam Shoemaker Bldg, Ste 201, 11065 Little Patuxent Parkway, Columbia, MD 21044. 301-997-1414 or 301-467-3886.

### RADIOLOGY

A lucrative and continuously expanding Radiology and MRI practice in the greater Baltimore area is looking for a partnership or buyer for the entire practice. Write: Radiologist, 406 Pennsylvania Ave., Towson, MD 21204.

### PEDIATRICIAN

Pediatric Group, Baltimore suburb, desires pediatrician for employment, leading to full partnership. Send resumé to Box 9, 9121 Reistertown Road, Owings Mills, MD 21117.

### PHYSICIANS WANTED

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

### GYNECOLOGY PRACTICE

Excellent solo GYN practice for sale in North Baltimore. Fee for service. Good OB potential. Respond Box 10.

### PEDIATRIC PRACTICE

Well-established practice in the Rockville/Bethesda area. The practice has a strong, increasing patient flow with an excellent collection ratio and no managed care. Negotiable terms. Contact Steve Witman, Kohler HealthCare Consultants, 301-441-3740.

## BECO MANAGEMENT, INC.

### Medical Suites Available

Montgomery Village Professional Center  
19201 - 19271 Montgomery Village Avenue  
Gaithersburg, Maryland

Southern Medical Building  
9131 Piscataway Road  
Clinton, Maryland

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550

## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Anne Salmon Barone, Ph.D., M.D.  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000



### MEDICAL PRACTICE FOR SALE

Established medical practice for sale. Suitable for 1 or 2 physicians. Opportunity for Family Physician or Internist. Will introduce to patients and medical community if needed. Please contact: Joseph Taler MD, 95 Aquahart Rd, Glen Burnie, MD 21061 (301-766-4747).

### COSMETIC SURGERY PRACTICE

Established practice located in Montgomery County, Maryland. Fully equipped surgery center with two operating rooms. Located in modern, spacious office condominiums. Contact Steve Witman, Kohler HealthCare Consultants, 301-441-3740.

### OFFICE TO RENT

Fully furnished office to rent. Newly decorated multi-doctor office. Private consultation room, 3 exam rooms, secretary space. Large parking lot. Access to MTA. St. Joseph Prof. Bldg. #213. 828-5100/821-5758.

### MEDICAL OFFICE

Suitable for 1 or 2 physicians: St. Mary's County, a rapidly growing, semirural area. Contact Leon Berube for details: 997 Old Route Five, Mechanicsville, MD 20659 (301-884-3113).

### MEDICAL OFFICE FOR SALE

Glen Burnie. 1000 sq. ft. Near hospital. Adequate private parking. Suitable for 1 or 2 physicians. Call 301-484-2797.

### DOCTOR'S OFFICE

Reasonable. Very desirable location. N. Rolling Rd. near Security Mall. Available Tues., Thurs. & alternate Sats. Fully furnished & utilities included. Own parking lot. CALL 747-6881.

### MEDICAL OFFICE FOR SALE OR LEASE

2000 sq ft in excellent location near Cross Keys in medical office building. Very convenient to most major hospitals. Contact Rick Tucker at 727-8347.

### MEDICAL OFFICE FOR SALE OR SUBLEASE

Brand new office located in Professional Center in Ellicott City. 912 sq ft. 2 exam rm. All equipment included. Call 461-7078

### OFFICE FOR SUBLEASE

Fridays at the O'DEA Medical Arts Building on Osler Dr., includes front office support. Call 433-7300, Dr. Smyth or Marilyn Belkin.

### MEDICAL OFFICE SUITE FOR LEASE

Osler Medical Center, Towson; near St. Joseph Hospital, GBMC, and Sheppard Pratt Hospital. Info: R.R. Kent MD, 301-323-5831 or 301-461-9922.

### BEL AIR OFFICE TO SHARE

OB/GYN practice wishes to sublease space in new office. Morning & afternoon hours available. Office opened July 1, 1991. Please contact Lorraine O'Connor at 339-7640.

### MMJ Classified Advertising

*Med Chi Members:*  
\$5 per line per insertion

*Physician Nonmembers:*  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment. Ad cancellations must be received in writing seven weeks prior to the first of the month.

Send ad replies or new ad copy to: **MMJ**, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

### FOR SALE - OFFICE TOWNHOUSE

Up to 5500 square feet. Highly visible location on Rt. 355. Convenient to Shady Grove Hospital. Call 571-6500.

### PROFESSIONAL RESUMÉ SERVICES

Successfully serving physicians since 1976. All specialties. Effective! Confidential. We provide curriculum vitae preparation, cover letter development and career planning. Immediate service available. Call 1-800-786-3037 (24 hrs). Alan Kirschen, M.A. ■

### MARYLAND/EASTERN SHORE

Opportunity for career-oriented full-time Emergency Physician to practice in an ideal setting. Memorial Hospital at Easton is a 217 bed, level II center with 18,000 ED visits per year and offers a top notch salary and benefit package (including 8 weeks paid annual leave), CME, supportive Administration and excellent medical staff back up. The Easton area offers the best of Chesapeake Bay recreation, food and family life.

Please contact: Richard A. Marasa, M.D., FACEP  
Chief, Emergency Department  
Memorial Hospital  
South Washington Street  
Easton, Maryland 21601  
1-800-666-3222 Ext. 5607

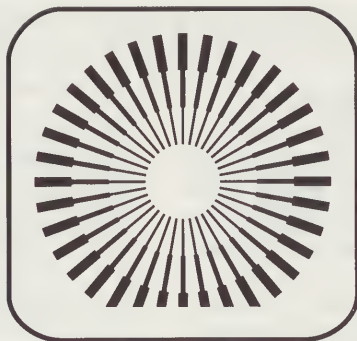


EOE

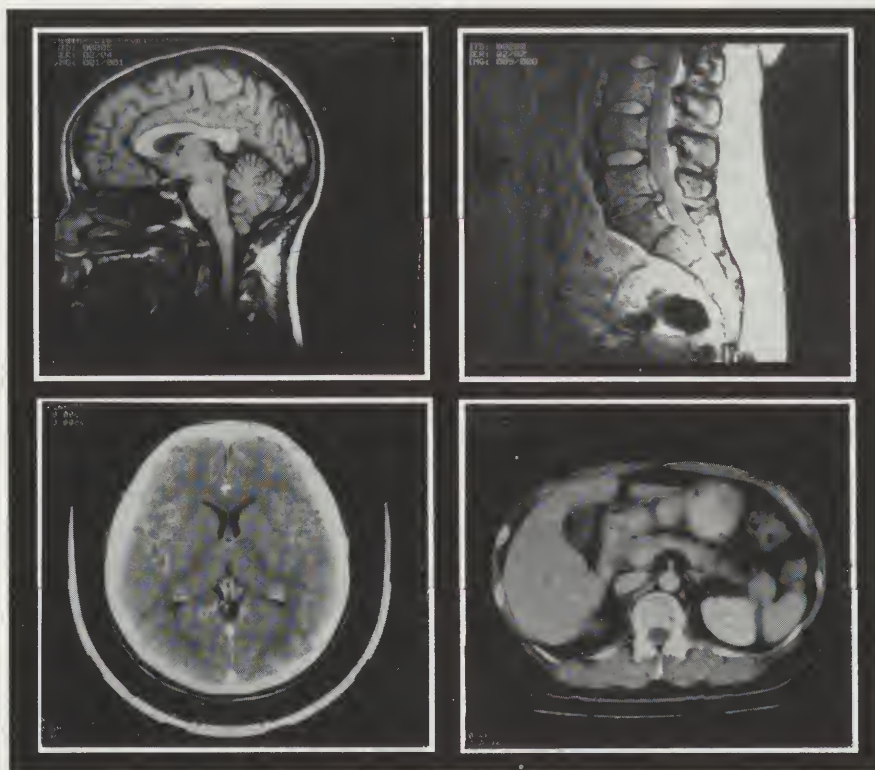
### PHYSICIANS:

M.D.'s with general medical, surgical, or Family Practice background to work as urgent care physicians in busy hospital Emergency Department. Part-time/full-time positions available. Competitive salary; flexible hours.

For details, contact: Dan K. Morhaim, M.D.  
Franklin Square Hospital Center  
9000 Franklin Square Drive  
Baltimore, MD 21237  
(301) 682-7046



# TOWSON IMAGING CENTER



## OPENING THIS MONTH!

*(A Local Physician Partnership)*

A FULL SERVICE DIAGNOSTIC CENTER OFFERING STATE-OF-THE-ART EQUIPMENT:

**MRI — G.E. 1.5T Signa Advantage high field strength magnet with  
MR — Angiography**

High resolution images of head, body and musculo-skeletal system.

**CT — G.E. Pace Plus**

Head and whole body imaging.

**RADIOGRAPHY**

- Now taking appointments
- Same Day scheduling
- Same day reporting
- Physician consultation with radiologist available
- Duplicate films provided



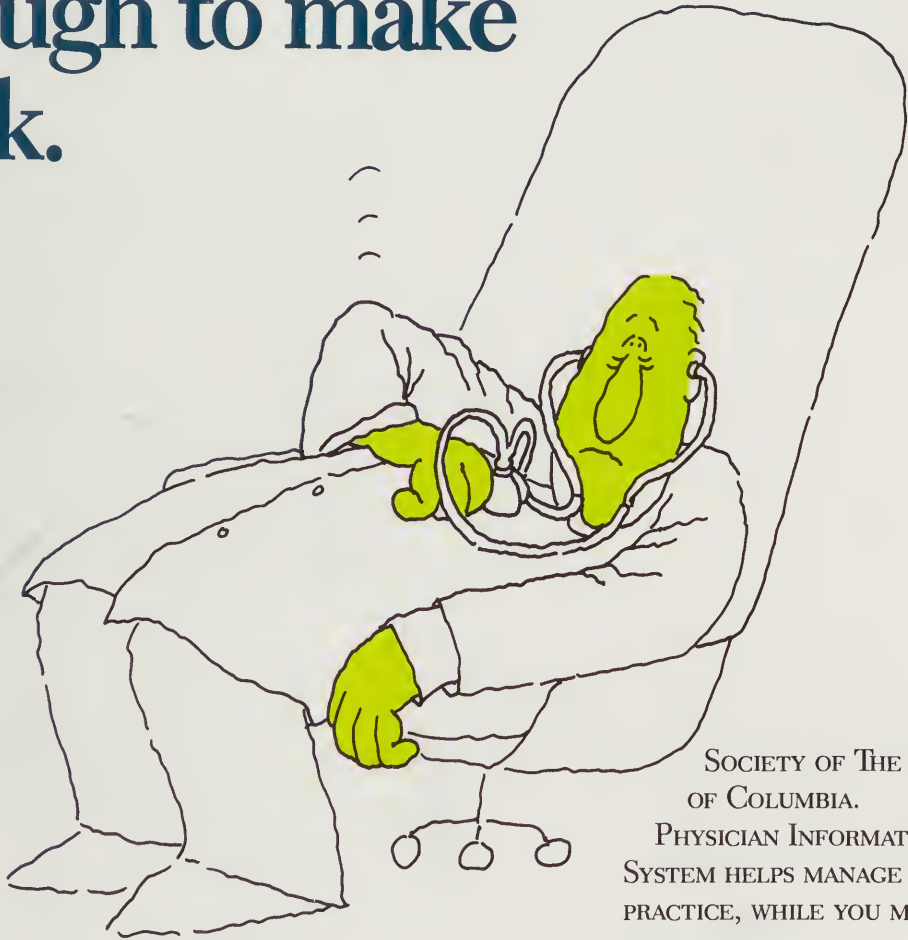
**TOWSON  
IMAGING  
CENTER**

1304 Bellona Avenue  
Lutherville, MD 21093  
Phone: (301) 825-3500  
FAX: (301) 825-3509

***Quality Service to Our Physicians and Patients!***



# Competition, HMOs, Insurance and slow-paying patients... it's enough to make you sick.



THE PROBLEMS  
OF MANAGING A  
PRACTICE TODAY  
CAN REALLY MAKE  
YOU SICK.

EVEN WORSE,  
THEY CAN MAKE THE  
BUSINESS END OF YOUR PRACTICE  
SICK, TOO. THAT'S WHERE WE  
CAN HELP.

WE'RE CBSI, THE LEADER IN  
MEDICAL OFFICE AUTOMATION  
SYSTEMS SINCE 1977. OUR PHYSI-  
CIAN INFORMATION SYSTEM  
SUBMITS YOUR INSURANCE  
FORMS ELECTRONICALLY, POSTS  
PAYMENTS AND ADJUSTMENTS  
AUTOMATICALLY, AND RUSHES  
YOU COMPLETE, UP-TO-THE-  
MINUTE PATIENT CLINICAL AND  
FINANCIAL DATA. CURRENTLY  
RELIED UPON BY MORE THAN

**ALPHA MICROSYSTEMS**  
RIGHT FROM THE START.

5,000 PHYSICIANS IN OVER 50  
MEDICAL SPECIALTIES AROUND  
THE AREA. MORE THAN 99% OF  
THESE SYSTEMS ARE STILL IN USE  
TODAY BECAUSE THEY'RE FLEX-  
IBLE, ADAPTABLE AND CBSI  
BACKS THEM WITH UNPARAL-  
LELED HARDWARE MAINTEN-  
ANCE, CUSTOMER SUPPORT  
AND TRAINING.

SINCE 1981, CBSI CONTINUES  
TO BE THE ONLY PROVIDER OF  
MEDICAL OFFICE AUTOMATION  
ENDORSED BY THE MEDICAL

SOCIETY OF THE DISTRICT  
OF COLUMBIA.

PHYSICIAN INFORMATION  
SYSTEM HELPS MANAGE YOUR  
PRACTICE, WHILE YOU MANAGE  
YOUR PATIENTS.

CALL 770-2292 RIGHT NOW TO  
FIND OUT MORE ABOUT PHYSICIAN  
INFORMATION SYSTEM. IN  
MARYLAND, CALL TOLL-FREE AT  
1-800-638-6364.

# CBSI

COMPUTER BUSINESS SYSTEMS, INC.

**YOUR PRACTICE IS OUR BUSINESS.**

6211 Executive Boulevard,  
Rockville, Maryland 20852  
(301) 770-2292  
1-800-638-6364 in Maryland

An Affiliate Member of MedServ

# When you choose Princeton, you're in good company

“The Surgicenter was a new entity, and most insurers didn't know how to handle it. One wouldn't cover this procedure, the other wanted to exclude that one.

Princeton reviewed how we performed these procedures and then provided coverage for everything. They were flexible and willing to work with us so that we got the coverage we needed.”

---

*Dr. Lawrence Pinkner  
Plastic surgeon  
President, Surgicenter of Baltimore*

---

**Since 1982, Princeton  
has been designing  
insurance policies  
to meet the needs of  
medical professionals.**



Princeton Insurance Company  
4 North Park Drive  
Hunt Valley, MD 21030-1812  
301-785-0900

**More than  
1,200 doctors  
in Maryland  
and Delaware  
have chosen  
Princeton for  
their professional  
liability coverage.  
It's easy to switch.  
Why wait?**





**M M J**  
*Maryland Medical Journal*

OCTOBER 1991

An autoimmune, immune-complex disease  
primarily affecting young women,  
it may result in arthritis,  
neuropsychiatric manifestations,  
and major organ impairment.  
Although there is no cure,  
there are multiple ways to  
minimize the impact of

# Systemic Lupus

# Erythematosus

2  
NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA MD 20894

Endorsed by Med Chi  
for Maryland Physicians

©1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.



## It's A Closed Box.

Simply put, your Medical Mutual premiums go into a closed box . . . and you own the box. We pay claims, we pay to defend physicians, we pay operating expenses. Any money left over belongs to you. That's it. No money goes to out-of-state owners, no money goes to subsidize operating expenses of a parent company located in another state. Dividends are paid to you, not to outside stockholders.

The physicians of Maryland planned it this way when you asked the Maryland General Assembly to create Medical Mutual to meet your special insurance needs. It's a concept that has worked well for over 15 years, and it's a concept that has made Medical Mutual the choice of the vast majority of physicians across the state.

The closed box. We're the only ones who operate this way. Why accept anything less?



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193





# At the SurgiCenter, we've found a way to relieve the most common discomfort of all.

Tired of the paperwork and red tape most hospitals put you through?

Then consider operating out of the SurgiCenter of Baltimore.

Thanks to the latest in state-of-the-art medical equipment, a supporting staff of the area's most caring and capable nurses and technicians, and a comfortable, intimate setting, we're able to fully meet your same-day surgical needs.

Without causing you or your patients any undue stress or discomfort.

And unlike high-traffic hospitals, we're committed to one thing

and one thing only — outpatient surgery. So we can operate more efficiently, and with less overhead. A point your patients are sure to appreciate come billing time.

We're also easy to get to. And we'll bend over backwards to make sure you have a room when you need it.

Plus, we have agreements with all the major insurance carriers and HMO's in the state.

So drop by for a tour. Any time. Or call 356-0300 for more information.

Find out why nearly 100 of the area's finest physicians and

surgeons are operating at the SurgiCenter of Baltimore.

And turn what used to be a complex and painful procedure into a breeze.

THE  
**SurgiCenter**  
OF BALTIMORE

McDonough Crossroads  
23 Crossroads Drive  
Owings Mills, Maryland 21117  
(301) 356-0300

**A joint venture of Health Specialists P.A. and Sinai Hospital**

Medicare and AAAHC Accredited



## Making the right choices means asking the right questions.

You know the questions to ask your patients. Questions that will provide the information you need to make an informed decision about medical treatment.

When it comes to choosing a medical malpractice insurer, knowing which questions to ask--and how to interpret the answers--is no less important. Because just as your treatment decisions may have lasting impact on your patient's long-term health, your choice of insurer may make all the difference to your professional and financial well-being in the years ahead.

In an uncertain medical situation, you might consult a specialist. When you're making decisions about insurance, why not consult with an insurance specialist? An expert who can suggest which

questions to ask, guide you through the technical jargon, and help you select the coverage that's right for you.

That's where Princeton's network of independent insurance agents comes in. Our agents understand the insurance needs of health care professionals. They'll show you how to compare costs and benefits, and help you avoid gaps or duplications in coverage.

Do ask an agent why Princeton should be your choice. Ask about our financial strength, about our claims management philosophy that vigorously defends physicians against meritless claims...and about our new office package policy that offers protection for your practice and premises. We think you'll like the answers.



**Princeton Insurance Company**

4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900

### Princeton's Maryland Agents

Affiliated Financial Services, Inc.  
Columbia, MD (301) 992-0043

Beall, Garner, Screen & Geare  
Cumberland, MD (301) 722-2500

Harry Cohen Insurance Agency, Inc.  
Baltimore, MD (301) 366-3030

Comprehensive Risk Management  
Timonium, MD (301) 560-2424

Consolidated Insurance  
Baltimore, MD (301) 944-9550

Contemporary Insurance Services  
Washington, D.C. (800) 658-8943  
(202) 887-5563

Corroon & Black, Stump, Harvey, Cool  
Hunt Valley, MD (301) 527-1200  
Bethesda, MD (301) 951-3300

Diversified Insurance Industries  
Baltimore, MD (301) 433-3000

William C. Garrett & Associates  
Towson, MD (800) 458-7295

Hardesty Insurance Services  
Dover, DE (302) 678-9555

The Harjes Agency  
Hunt Valley, MD (301) 785-6161

Ralph W. Lee & Company  
McLean, VA (703) 556-8787

MBS Insurance Services  
Mountain Lakes, NJ (201) 335-2900

Medical Liability Agency, Inc.  
Towson, MD (301) 296-8326

Medical Society of Delaware  
Insurance Services (MSDIS)  
Wilmington, DE (302) 571-0986

Med Net Financial  
Bethesda, MD (301) 961-8861

Onal's Insurance Agency  
Linthicum, MD (301) 859-1990

Reese, Yeatman & Associates, Inc.  
Bethesda, MD (301) 657-9490

Smith, Cropper & Deeley, Inc.  
Willards, MD (301) 835-2000

W.S. Borden Company  
Trenton, NJ (609) 394-5288

Widerman & Co.  
Cherry Hill, NJ (609) 428-0939

Wright-Gardner Insurance, Inc.  
Hagerstown, MD (301) 733-1234



# MMJ

## Maryland Medical Journal

OCTOBER 1991

VOLUME 40 NO 10

### ARTICLES

- The Maryland Lupus Foundation: A Commitment to Professional Education . . . 869**  
*Mary Betty Stevens MD*

- The History of Lupus Erythematosus . . . . . 871**  
*Marc C. Hochberg MD, MPH*

The history of lupus can be divided into the classical period which saw the description of the cutaneous disorder, the neoclassical period which saw the description of the systemic or disseminated manifestations of lupus, and the modern period which was heralded by the discovery of the lupus erythematosus cell in 1948.

- The Clinical Spectrum of SLE . . . . . 875**  
*Mary Betty Stevens MD*

Systemic lupus erythematosus is a complex immunologic disorder with an equally complex clinical presentation and course. In recent years, the earlier recognition of milder disease supported by immunologic markers coupled with means of intervention and suppression, as well as medical/surgical advances has resulted in increases in the quality of life and survival.

- Vascular Lesions in SLE . . . . . 887**  
*Thomas M. Zizic MD*

The confusing array of manifestations resulting from multisystem involvement in SLE is due, in part, to the widespread involvement of blood vessels.

- Autoantibodies and SLE . . . . . 901**  
*Carol M. Ziminski MD*

Systemic lupus erythematosus is characterized by an enormous and increasing array of antibodies to cellular constituents. These autoantibody phenomena are not diagnostic in themselves but must be interpreted within the context of the individual clinical situation.

- Variants/Subsets of SLE . . . . . 909**  
*Howard W. Hauptman MD*

Although systemic lupus erythematosus can be considered a single diagnostic entity, a number of clinical subsets have been described including late-onset lupus, drug-induced lupus, neonatal lupus, discoid lupus, and subacute cutaneous lupus.

- Management of the Pregnant Lupus Patient . . . . . 917**  
*John T. Repke MD and Michelle Petri MD, MPH*

Increased understanding of SLE as it relates to pregnancy has allowed for many women with lupus today to have a successful pregnancy. However, pregnancies are high risk with up to 25 percent ending in miscarriage and with a high frequency of preterm delivery.



Maryland Medical Journal  
1211 Cathedral Street  
Baltimore, MD 21201  
301 539-0872

### Editor

Victor R. Hrehorovich MD

### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

### Managing Editor

Janet Campbell MS, MS

### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Robert G. Knodell MD

Carmine M. Valente PhD (Advisory)

### Art Director

Virginia Carter

### Graphic Artist

Valentia McVey

Communications Assistant  
Lori Robinson

### Executive Director

Angelo J. Troisi FACHE  
Communications Director  
Michelle Burke MHSA

Copyright © 1991. MMJ Vol 40, No 10.  
The *Maryland Medical Journal*  
USPS 332080. ISSN 0025-4363 is pub-  
lished monthly by the Medical and  
Chirurgical Faculty of Maryland and  
is a membership benefit. Subscription  
rates: U.S. and U.S. possessions, one  
year: nonmembers \$35; foreign \$42.  
Single copy: members \$5; nonmembers  
\$7. Second class postage paid at Bal-  
timore, MD and at additional mailing of-  
fices. POSTMASTER: send address  
changes to *Maryland Medical Journal*,  
1211 Cathedral St., Baltimore, MD  
21201-5585. FAX 301-547-0915.

### Advertisers

Contact: Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

The views in this publication are those of the authors  
and do not necessarily reflect the opinion of the  
Medical and Chirurgical Faculty of Maryland.  
Publishing an advertisement does not imply endorse-  
ment of any product or service offered, or approval  
of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

## Medical Therapy for SLE . . . . . 923

David B. Hellmann MD

Today, the major therapeutic challenge in systemic lupus erythematosus is to preserve the gains provided by cor-  
ticosteroids while reducing their side effects.

## SLE: Management Overview . . . . . 935

Joan D. Sutton RN, MSN

Patients with systemic lupus erythematosus can often benefit  
from cooperative and collaborative interventions prescribed  
by both physicians and other arthritis health care profes-  
sionals.

## DEPARTMENTS

### Epidemiology and Disease Control Program . . . . . 853

*Pelvic Inflammatory Disease - Guidelines for Diagnosis and Treatment . .*

### Executive Director's Newsletter . . . . . 859

### Commentary . . . . . 942

*Treatment of Early-Stage Breast Cancer. .*

### Board of Physician Quality Assurance Actions . . . . . 944

### A Clinical Moment With .. Diabetes . . . . . 947

*A "Touch of Diabetes" . .*

### Maryland Oncology Newsletter . . . . . 948

*Prognostic Factors After Liver Resections . .*

### Auxiliary . . . . . 949

*Why Belong to the Auxiliary? . .*

## MISCELLANY

### Medical Miscellany . . . . . 849

*Performing Arts Medicine, National Medical Musical Group, American  
Heart Association Offers Research Awards . .*

### Special Report . . . . . 864

*Japanese Physician Delegation to Visit Maryland . .*

### Annual Meeting . . . . . 916

### Members in the News . . . . . 953

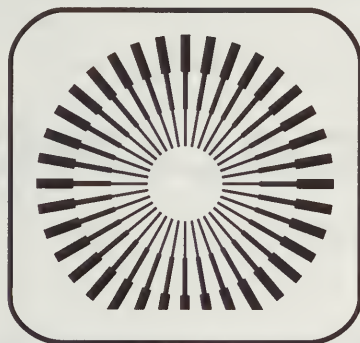
*John L. Cameron MD, Lawrence E. Holder MD, FACR, Theodore M. King  
MD, Harry C. Knipp MD, Patrick C. Walsh MD . .*

### Information for Authors . . . . . 954

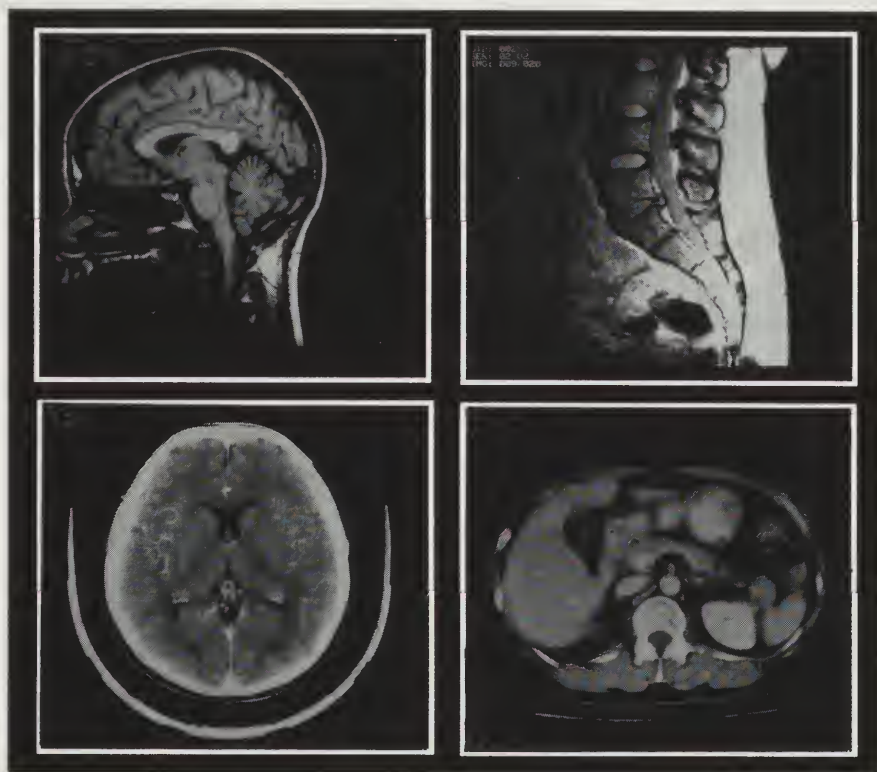
### CME Programs . . . . . 955

### Classified Ads . . . . . 960





# TOWSON IMAGING CENTER



## NOW OPEN!

*(A Local Physician Partnership)*

A FULL SERVICE DIAGNOSTIC CENTER OFFERING STATE-OF-THE-ART EQUIPMENT:

**MRI — G.E. 1.5T Signa Advantage high field strength magnet with  
MR — Angiography**

High resolution images of head, body and musculo-skeletal system.

**CT — G.E. Pace Plus**

Head and whole body imaging.

**RADIOGRAPHY**

- Now taking appointments
- Same Day scheduling
- Same day reporting
- Physician consultation with radiologist available
- Duplicate films provided



**TOWSON  
IMAGING  
CENTER**

1304 Bellona Avenue  
Charles and Beltway  
Lutherville, MD 21093  
Phone: (301) 825-3500  
FAX: (301) 825-3509

*Quality Service to Our Physicians and Patients!*

*Physicians & Health Care Professionals*

## **MARK YOUR CALENDAR!**

for a Mid-Atlantic Medical conference on

---

### **THE AFRICAN-AMERICAN PERSPECTIVE ON SUBSTANCE ABUSE**

“What every physician & health care professional should know  
about substance abuse in the black community.”

---

### **SPECIAL GUEST SPEAKERS**

**Dr. Walter Faggett**

**Dr. Therman Evans**

Saturday, November 23, 1991  
Stouffer Harborplace Hotel in Baltimore

C.M.E. Credits Available

*Sponsored by:*

Monumental City Medical Society &  
Baltimore City Health Department

Honorary Co-Chairpersons:

Kurt L. Schmoke  
*Mayor, City of Baltimore*

Nelson J. Sabatini  
*Maryland Secretary of Health*

---

*Clip this coupon and send it with a check to*

**Monumental City Medical Society  
c/o Evelyn Campbell, BCHD, 303 E. Fayette St.  
8th fl, Baltimore, MD 21202**

Call Ms. Campbell with any questions at (301) 396-1229.

**Registration Fee \$75**

Name \_\_\_\_\_ Title \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone \_\_\_\_\_

*An agenda will be mailed immediately. Registration deadline is November 5, 1991.*



Performing Arts Medicine: Issues in  
Diagnosis and Management

The Committee on Medicine and the Performing Arts will sponsor a continuing medical education conference, January 24-25, 1991, at the Med Chi Faculty Building in Baltimore. Tentatively titled, "Performing Arts Medicine: Issues in Diagnosis and Management," the conference will provide information for primary care physicians who see a few amateur performers, as well as for those specializing in the care of musicians and dancers. The conference will also include sessions of value to allied health care professionals and to performers themselves. In addition, registrants will be treated to a chamber music concert by students from Peabody Conservatory.

The plenary speaker will be Dr. Hunter Fry, an Australian expert in overuse injuries, who has shown continued interest in the growth of arts medicine in Maryland. Other topics to be covered include:

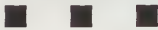
- the epidemiology of performing arts medicine,
- medical problems of young dancers,
- neurologic testing,
- performance anxiety,
- medicolegal issues,
- the role of the musician and special career demands, and
- physical therapy techniques.

Committee members John B. DeHoff MD, Emidio Bianco MD, Harold Bob MD, Scott Brown MD, Norman Rosen MD, Leo Rozmaryn MD, Charles Silberstein MD, Sandra Bishop, Ruth Drucker, and David Fetter will serve as speakers, moderators, and planners.



National Medical Musical Group

The Veterans Administration National Medical Musical Group (VA-NMMG) is a chorus and symphony orchestra made up of physicians and other health professionals from VA and non-VA medical centers around the country. The organization, which gave a highly acclaimed performance last December at DAR Constitution Hall in Washington, DC, is currently recruiting new members. If you are a good singer or play a musical instrument, and would be interested in participating in this year's benefit for homeless veterans on December 4, contact Debby Marshall at 202-667-3879 or write: VA-NMMG, 1700 17th Street, NW, Suite 508, Washington, DC 20009.



American Heart Association  
Offers Research Awards

The American Heart Association (AHA), Maryland Affiliate, is taking applications for research awards. The American Heart Association supports research projects related to the cardiovascular/cerebrovascular system, including basic science, clinical studies, epidemiology, risk factor identification and avoidance, lifestyle modification, and recognition of cardiovascular disease. Last year, the AHA devoted more than \$626,000 to fund thirty researchers in Maryland. For information on and applications for *Research Fellowships* (\$20,000 per year plus \$750 for travel and supplies), *Nutrition Research Awards* (\$25,000 per year plus fringe benefits), and *Grants-in-Aid* (\$20,000 per year plus 10 percent institutional overhead), call Margaret Prausnitz at 301-685-7074 or 1-800-432-7803. Submission deadline is November 1, 1991 -- no exceptions.

Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of the *Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel  
MMJ 1211 Cathedral Street  
Baltimore, MD 21201

Old Address

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Signature: \_\_\_\_\_

New Address

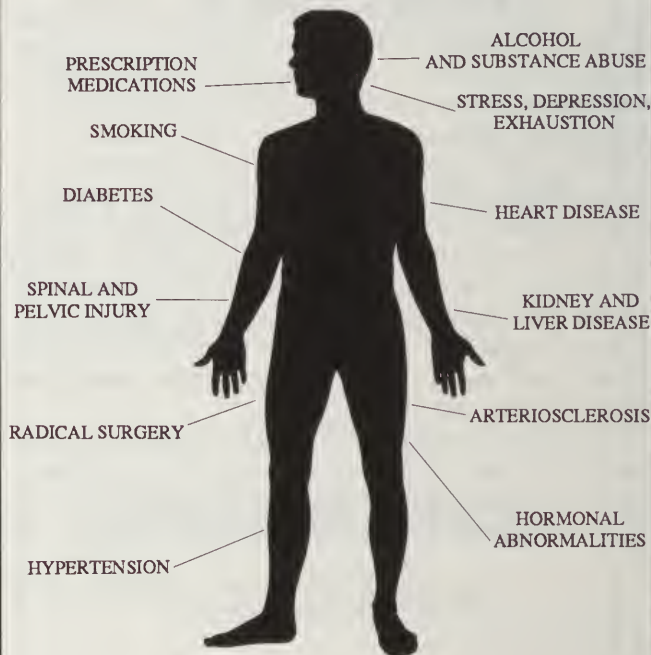
Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Date Effective: \_\_\_\_\_  
Date: \_\_\_\_\_

CABINETRY AND  
FURNITURE  
FOR THE  
HEALTH CARE  
INDUSTRY

<sup>®</sup>  
Cabinet Max

Manufactured By  
G&F Datum, Inc.  
Baltimore, Maryland  
301-247-1880

## Impotence: Whatever The Cause...



## We Have The Treatment.

- Counseling
- Drug-Injection Therapy
- Mechanical Devices
- Medications
- Prosthesis
- Revascularization

Maryland's first health center dedicated solely to the comprehensive diagnosis and treatment of impotence. Physicians and patients now have an answer.



1104 Kenilworth Drive • Suite 406  
Baltimore, MD 21204

**1-301-296-MRIC**  
**1-800-955-MRIC**



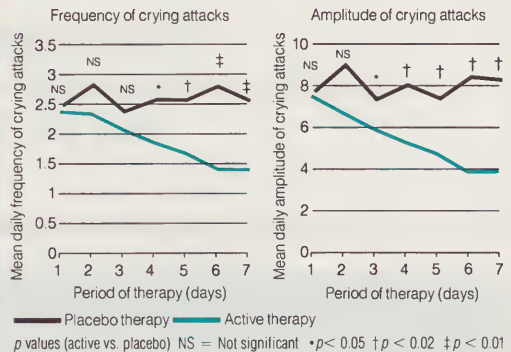
# Family therapy for colic.

The excessive crying of colic puts a strain on the most loving family—and often on their physician as well. And whatever the cause of colic, one fact is clear:

## Gas is often part of the colic problem.

New Phazyme Drops contains simethicone, which can safely break up gas and bring baby relief. That's why it can help whenever colic is a problem.

## Significantly reduces crying of colicky infants.<sup>1</sup>



Double-blind, randomized, placebo-controlled study.

## Priced 25% below the leading brand.

This significant price advantage will be particularly important to parents, since they may be relying on Phazyme Drops for up to three months. And it's naturally flavored—something else they'll appreciate.



# Phazyme® Drops (simethicone/ antigas)

## Helps you through the colic phase.

1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner*. 1988;232:508.

REED & CARNICK  
Piscataway, NJ 08855

©1989 Reed & Carnick

PZ24

## With Malpractice Insurance Premiums on the rise, why settle for anything less than the best available coverage?

The downward trend in malpractice insurance premiums has broken and prices are on their way back up. Should a physician choose between insurers only on price? Of course not. But there are a number of quality choices between carriers and products. You should get the most from your premium dollars.

Let us compare the available products and prices for you. There is no charge or obligation. For written quotations and comparisons call us or send us a copy of your malpractice policy. Let us show you why hundreds of Maryland physicians rely on us for their malpractice coverage. You need a broker you can rely on.

### Contemporary Insurance Services

1000 Connecticut Avenue, N.W., Suite 1112, Washington, D.C. 20036

(202) 887-5563 • Toll Free 1-800-658-8943

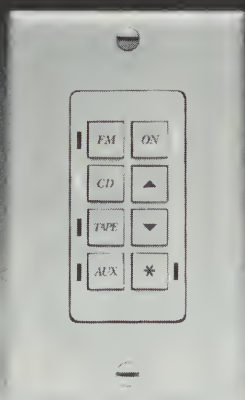
FAX (202) 452-6093

Turn it up. Turn it down.  
Let the music follow you around.  
Whole house stereo from Gramophone.

Phantom of The  
Opera in the  
kitchen

Mozart in the  
bedroom

Ronstadt in  
the den



Everyone can  
have their  
music where  
they want it.

Whether you're looking for a new CD player  
or a whole house stereo, Gramophone  
can bring your home to life with music.

## GRAMOPHONE

*Maryland's Finest Stereo and Video Stores*

BALTIMORE • 821-5620 ∞ COLUMBIA • 465-5500

INTERIOR DESIGN • SPACE PLANNING •  
FURNITURE & CABINETRY SELECTION • CUSTOM  
CABINETRY • SURGI-CENTERS • SURGERY &  
AMBULATORY CARE FACILITIES • MEDICAL &  
DENTAL OFFICES • LABORATORIES • MEDICAL  
OFFICE BUILDINGS • CONSTRUCTION  
ADMINISTRATION • COST ESTIMATING



**LEVIN/BROWN & ASSOCIATES**  
ARCHITECTS/INTERIOR DESIGNERS

17 Warren Road  
Suite 7B  
Baltimore, MD 21208  
(301) 486-9006





# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

October, 1991

## Pelvic Inflammatory Disease (PID) Guidelines for Diagnosis and Treatment

### I. DIAGNOSIS

Clinical diagnosis of PID is difficult because of the wide variation in symptoms and signs among women with this condition. Many women with PID may exhibit subtle, vague, or mild symptoms that are not readily recognized as PID. This situation interferes with timely diagnosis, inhibits effective treatment, and contributes to inflammatory sequelae in the upper-reproductive tract. Laparoscopy can be used to obtain a more accurate diagnosis of salpingitis and a more complete bacteriologic diagnosis. However, this diagnostic tool is often neither readily available for acute cases nor easily justified when symptoms and signs are mild and/or vague. Moreover, laparoscopy will not detect endometritis and may not detect subtle inflammation of fallopian tubes. Consequently, the diagnosis of PID is often based on clinical findings supplemented with results of cultures or non-culture tests of samples obtained from the endocervix.

The clinical diagnosis of PID is imprecise. In published studies, when compared with laparoscopy as the standard, a clinical diagnosis of symptomatic PID has a predictive value positive of approximately two-thirds. No single historical, physical, or laboratory finding is both sensitive and specific for the diagnosis of PID (i.e., can be used both to detect all cases of PID and to exclude all women without PID). Combinations of diagnostic findings, which improve either sensitivity (detect more women who have PID) or specificity (exclude more women who do not have PID), have done so only at the expense of the other (i.e., requiring two or more findings will exclude more women without PID, but will also reduce the number of patients with PID who are detected).

Current evidence indicates that many episodes of PID are unrecognized. Although some women may have truly asymptomatic ("silent") PID, others go undiagnosed because they or their health-care providers fail to recognize the implications of mild or nonspecific symptoms

and/or signs. Because of the potential for damage to the reproductive health of women by even these apparently mild cases of PID, a "low threshold for diagnosis" of PID is recommended. The following recommendations for diagnosing PID are intended to help clinicians both recognize when PID should be suspected and gain additional information to increase their diagnostic certainty.

Treatment for PID should be instituted on the basis of these minimum clinical criteria for pelvic inflammation in the absence of competing diagnoses (e.g., positive pregnancy test, acute appendicitis).

---

#### Minimum Criteria for Clinical Diagnosis of PID

- Lower abdominal tenderness
  - Bilateral adnexal tenderness
  - Cervical motion tenderness
- 

Among women with severe clinical signs, more elaborate diagnostic evaluation is warranted because incorrect diagnosis and management may cause unnecessary morbidity. Thus, additional criteria should be used to increase the specificity of diagnosis. Routine criteria are those that are simple to assess; elaborate criteria are more definitive but are more expensive and often invasive.

---

#### Additional Criteria Useful in Diagnosing PID

##### Routine

- Oral temperature  $> 38.3^{\circ}\text{C}$
- Abnormal cervical or vaginal discharge
- Elevated erythrocyte sedimentation rate and/or C-reactive protein
- Culture or non-culture evidence of cervical infection with *N. gonorrhoeae* or *C. trachomatis*

## Elaborate

- Histopathologic evidence on endometrial biopsy
- Tubo-ovarian abscess on sonography
- Laparoscopy

---

Although not necessary to justify initial treatment decisions, bacteriologic diagnosis is helpful. It provides diagnostic confirmation (thereby improving management and reinforcing the need to treat sex partners) and serves as baseline for test-of-cure cultures.

---

## Tests Recommended for All Suspected Cases of PID

- Cervical cultures for *N. gonorrhoeae*
  - Cervical culture or non-culture test for *C. trachomatis*
- 

## OTHER IMPORTANT DIAGNOSTIC CONSIDERATIONS

The diagnostic approach outlined above reflects a growing concern that PID is often not diagnosed, especially among women with mild or atypical clinical signs. Although correcting this situation is a high public health priority, three qualifications regarding this more sensitive diagnostic approach must be noted.

First, the use of highly sensitive PID diagnostic criteria means that many women who do not have PID will be misdiagnosed and treated for PID (low specificity). Patients and their sex partners often have strong emotional reactions when faced with the implications of a diagnosis of STD. The health-care provider must, therefore, inform a patient of a diagnosis of PID carefully. Both the uncertainty of the diagnosis and the value of empiric treatment must be explained clearly.

Second, careful follow-up is necessary. If no clinical improvement has occurred at 48-72 hours, alternate diagnoses (e.g., appendicitis, endometriosis, ruptured ovarian cyst, or adnexal torsion) should be reconsidered. Use of alternate or additional antimicrobial therapy should also be considered.

Third, use of even these minimum clinical criteria may exclude some women with PID. Clinicians should not withhold therapy from a woman in whom they suspect PID because of failure to meet these criteria.

## II. TREATMENT

### A. Patient Education

The clinician's role as a health educator is central to effective management. Practitioners should explain to

women the nature of their disease and should encourage them to comply with therapy and prevention recommendations. Specifically, practitioners should:

- Emphasize the need for taking all the medication, regardless of symptoms.
- Review contraindications and potential side effects.
- Identify and discuss potential compliance problems.
- Review the medical purpose of follow-up evaluation.
- Emphasize the need to avoid sex until treatment is completed.
- Emphasize the need to refer sex partners for evaluation and treatment.

When medical-care messages are clear, explicit relevant, and rigorously delivered by providers, patients are likely to comply. Reinforcement of these messages can be achieved by providing written information. Information on written materials for patient distribution can be obtained from CDC or local and state health departments.

### B. Management of Sex Partners

**Treatment for sex partners of women with PID is imperative. The management of women with PID should be considered inadequate unless their sex partners have been appropriately evaluated and treated.** Failure to manage her sex partner(s) effectively places a woman at risk for recurring infection and related complications. Moreover, untreated sex partners often unknowingly transmit STD in a community because of asymptomatic infection.

In clinical settings in which only women are seen, special arrangements should be made to provide care for male sex partners of women with PID. When this is not feasible, clinicians should ensure that sex partners are referred for appropriate evaluation and treatment. After evaluation, sex partners should be empirically treated with regimens effective against *C. trachomatis* and *N. gonorrhoeae* infections.

### C. Hospitalization

The efficacy of outpatient management for preventing late sequelae remains uncertain. A single intramuscular (IM) injection of cefoxitin or ceftriaxone, even in conjunction with oral doxycycline for 10-14 days, will provide less complete antimicrobial coverage for a shorter duration than regimens recommended for inpatients. Theoretically, outpatient management could, therefore, reduce the likelihood of successful eradication of upper-genital-tract pathogens and potentially increase the likelihood of late sequelae. Currently, no data are available to adequately assess the risks, benefits, and costs of inpatient versus outpatient treatment for PID.



As for all serious intra-abdominal infections, hospitalization should be considered whenever possible, and is particularly recommended in the following situations:

- The diagnosis is uncertain.
- Surgical emergencies such as appendicitis and ectopic pregnancy cannot be excluded.
- A pelvic abscess is suspected.
- The patient is pregnant.
- The patient is an adolescent (adolescent patients' compliance with therapy is unpredictable, and the long-term sequelae of PID may be particularly severe for members of this group).
- Severe illness precludes outpatient management.
- The patient is unable to tolerate an outpatient regimen.
- The patient has failed to respond to outpatient therapy.
- Clinical follow-up within 72 hours of starting antibiotic treatment cannot be arranged.

Many experts recommend that all patients with PID be hospitalized so that treatment with parenteral antibiotics can be initiated.

#### D. Treatment Regimens

Although several antimicrobial regimens have been proven highly effective in achieving clinical cure, no single therapeutic regimen of choice exists for persons with PID, unlike treatment for many specific sexually transmitted organisms. PID is a complex syndrome that encompasses a broad spectrum of inflammatory diseases (e.g., endometritis, salpingitis, and tubo-ovarian abscess) that may be caused by a variety of organisms.

Guidelines for the treatment of patients with PID, therefore, have been designed to provide flexibility in therapeutic choices. PID therapy regimens are designed to provide broad-spectrum coverage of likely etiologic pathogens. In addition to considering microbial etiology, selection criteria for a treatment regimen should also include institutional availability, cost-control efforts, patient acceptance, and regional differences in antimicrobial susceptibility.

The treatment regimens that follow are recommendations, and the specific antibiotics named are examples. Treatments used for persons with PID will continue to be broad spectrum until more definitive studies are performed. **Any regimen used, however, should cover *C. trachomatis*, *N. gonorrhoeae*, anaerobes, gram-negative rods, and streptococci.**

##### 1. Inpatient treatment

One of the following:

---

#### Recommended Regimen A

- Cefoxitin 2 g intravenously (IV) every 6 hours or cefotetan IV 2 g every 12 hours (Other cephalosporins such as ceftizoxime, cefotaxime and ceftriaxone, which provide adequate gonococcal, other gram-negative aerobic and anaerobic coverage, may be utilized in appropriate doses.)

plus

- Doxycycline 100 mg orally or IV every 12 hours.
- 

The above regimen is given for at least 48 hours after the patient clinically improves. After discharge from hospital, doxycycline 100 mg orally 2 times a day should be continued for a total of 10-14 days.

---

#### Recommended Regimen B

- Clindamycin IV 900 mg every 8 hours

plus

- Gentamicin loading dose IV or IM (2 mg/kg of body weight) followed by a maintenance dose (1.5mg/kg) every 8 hours.
- 

The above regimen is given for at least 48 hours after the patient improves. After discharge from hospital, doxycycline 100 mg orally 2 times a day should be continued for 10-14 days total. Continuation of clindamycin 450 mg orally 4 times a day for 10-14 days may be considered as an alternative.

Continuation of medication after hospital discharge is important, particularly for the treatment of persons who may have *C. trachomatis* infection. Clindamycin has more complete anaerobic coverage than doxycycline. Although preliminary data suggest that clindamycin is effective against *C. trachomatis* infection, doxycycline remains the treatment of choice for patients with chlamydial disease. Thus, when *C. trachomatis* is strongly suspected as an etiologic agent, doxycycline is the preferred alternative. In such instances, doxycycline therapy may be started while the patient is hospitalized if initiating therapy before hospital discharge is likely to improve the patient's compliance.

#### Rationale

Clinicians have extensive experience with both the cefoxitin/doxycycline and clindamycin/aminoglycoside combinations. Each of these regimens provides broad coverage against polymicrobial infection and has been shown in numerous studies to be highly effective in achieving clinical cures. However, data are lacking on the efficacy of these regimens, as well as other regimens,

in preventing late sequelae. Cefotetan has properties similar to those of cefoxitin and requires less frequent dosing. Clinical data are limited on other third-generation cephalosporins (ceftizoxime, cefotaxime, ceftriaxone), to replace cefoxitin or cefotetan, although many authorities believe they are effective. Doxycycline administered orally has bioavailability similar to that of IV formulation and may be given if normal gastrointestinal function is present.

Experimental studies suggest that aminoglycosides may not be optimal treatment for patients who have gram-negative organisms within abscesses, but clinical studies suggest that they are highly effective in treating persons for abscesses when administered in combination with clindamycin. Short courses of aminoglycosides are given to healthy young women when serum-level monitoring is usually not required.

## 2. Outpatient management

---

### Recommended regimen

- Cefoxitin 2 g IM plus probenecid, 1 g orally, concurrently or ceftriaxone 250 mg IM or equivalent cephalosporin

plus

- Doxycycline 100 mg orally 2 times a day for 10-14 days or tetracycline 500 mg orally 4 times a day for 10-14 days.
- 

---

### Alternative Regimen for Patients Who Do Not Tolerate Doxycycline/tetracycline (no data are available on this regimen)

- Substitute erythromycin 500 mg orally 4 times a day for 10-14 days.
- 

### Rationale

These empiric regimens provide broad-spectrum coverage against the common etiologic agents of PID. Notably, these regimens were particularly designed to

treat persons with chlamydial and gonococcal infections; few data are available on the efficacy of these regimens for treating persons with PID, particularly non-chlamydial/nongonococcal PID. Parenteral Beta-lactam antibiotics are recommended in all cases. The cephalosporins are effective in treating persons with gram-negative organisms, including enteric rods, anaerobic organisms, and gonococci. Although decreased susceptibility of gonococci to cefoxitin has recently been noted, clinically evident treatment failure has not been a problem. Patients who do not respond to therapy within 72 hours should be hospitalized for parenteral therapy. Doxycycline provides definitive therapy for chlamydial infections. Patients treated on an outpatient basis need to be monitored closely and reevaluated in 72 hours.

### E. Management of HIV-Infected Women

Although the precise etiologic relation between HIV infection and the risk of PID is uncharacterized-since HIV infection is sexually transmitted and PID is often caused by sexually transmitted pathogens-these two conditions often coexist. The management of coexistent HIV infection and PID is becoming an increasingly important concern. Differences in the clinical manifestations of PID among HIV-infected women have not been clearly described. However, PID among women immunocompromised for any reason may be more clinically severe and more refractory to medical management than PID among women with normal host defenses. It is reasonable to expect, therefore, that those HIV-infected women who are immunocompromised may be at increased risk for a complicated clinical course. In one study, HIV-infected women with PID were less likely than HIV-negative women with PID to have an elevated white-blood-cell count, but were more likely to have tubo-ovarian abscesses and to require operative intervention. HIV-infected women who develop PID should be followed closely with early hospitalization and IV therapy with a recommended antibiotic regimen, if possible.

References available on request (301-225-6688).

*This information is excerpted from CDC. Pelvic inflammatory disease: guidelines for prevention and management. MMWR 1991;40(no. RR-5):1-25.*

\*\*\*\*\*

## New EIS Officer, Dr. Betsy Thompson, Assigned to Maryland

Betsy L. Thompson, M.D., M.S.P.H. has been assigned by the Centers for Disease Control (CDC) as the Epidemic Intelligence Service (EIS) Officer for the state of Maryland for the next two years. Dr. Thompson completed her undergraduate training at St. Lawrence University and then worked in the Peace Corps for two years, first assigned to Liberia and then to Guatemala. She received her M.D. and her Masters of Science in Public Health at the University of Colorado and completed her residency in Internal Medicine--Primary Care at the University of California, San Francisco. She joined the Maryland Department of Health and Mental Hygiene, Epidemiology and Disease Control Program in July. During her CDC "field experience" in Maryland, she will focus on communicable disease epidemiology, but hopes also to become involved in injury epidemiology and chronic disease projects as well. She can be reached at (301) 225-6677.





The Johns Hopkins University School of Medicine  
Department of Emergency Medicine

*Presents*

Fifth Annual Postgraduate Program

## Core Content of Emergency Medicine: A Comprehensive Review

October 24, 1991 – October 30, 1991

Baltimore, Maryland



This seven-day program is **designed to review and reinforce your organization and comprehension of the essentials of Emergency Medicine**. Through a variety of educational experiences designed to complement most learning styles, our course provides many opportunities for self-assessment, review, and critical appraisal of the twenty-three core content areas of Emergency Medicine. The Core Content of Emergency Medicine was developed jointly by the American Board of Emergency Medicine (ABEM) and the American College of Emergency Physicians (ACEP). **We are the only national course that systematically reviews all content areas.**

This course is **recommended for the established physician in practice, the physician who has recently completed an Emergency Medicine residency training program, and second or third year residents currently in Emergency Medicine training programs**. Historically, the **majority of our registrants** have chosen our program as they near completion of a self-directed plan of study in **preparation for the written initial certifying or recertification examinations** offered by ABEM. Our course facilitates this final preparative process. Many other registrants choose our program as an annual "refresher course."

We continue to be gratified with the feedback provided by prior registrants and course faculty. Last year we field-tested the concept of providing multiple choice questions on computers in a program designed specifically for this course. Also, we presented our information in a format that correlated with the organization of the text *Emergency Medicine: A Comprehensive Study Guide* – ACEP, edited by Tintinalli, Krome, Ruiz. These new elements were very well received. We have retained this organizational format for 1991, and we have fully **incorporated the computer lab into our 1991 course**. **Special test-taking strategies sessions** were very well received last year and will be expanded for 1991. We will meet the specific needs of initial certify and the written recertification candidates.

Major changes in the organization of our program for 1991 include: course location close to airport, the availability of **a radiologist each evening for formal review of the daily films**, structured **discussion of PEER IV questions and answers**, showing of **videos of selected lectures in the Marriott guest rooms** for three hours each evening, and inclusion of **lunches** in the registration fee.

### COURSE OBJECTIVES AND FORMAT

The **educational objectives** of our program are to enable registrants to:

- Review and reinforce your organization and comprehension of the essentials of the core curriculum in Emergency Medicine
- Refine your test-taking skills
- Enhance your clinical skills
- Provide improved patient care

The **instructional resources** which are a part of the program include:

- **Faculty** from community and academic practices from around the country who have a keen interest and skill in teaching. **All course faculty have taken the ABEM written examination**. Faculty have been given the specific program objectives and guidelines for the preparation of their syllabus and lecture material. **They understand that many of our registrants are only days away from the actual written examination.**
- **Detailed course 'syllabus'** which is sent to you in advance. Each speaker has prepared a syllabus – in two parts. The first part is a comprehensive clinical review inclusive of pertinent clinical pathophysiology. This text is in modified outline form. The faculty have been asked to have their lectures follow the sequences of their syllabus as much as possible. The second section of the syllabus is entitled **"The Essentials."** This is a simplified listing of facts and concepts, and has been particularly helpful for personal review purposes just prior to the exam or as a reference in the emergency department. Each syllabus is edited by the program director to provide you with a "user friendly" document.
- The **didactic** portion of our program which will provide you with approximately 60 lectures. **Allocation of lecture time for the specific topics in each section has been determined by the**

**relative weight of the content areas as delineated by the American Board of Emergency Medicine** for written exam purposes. Lecture scheduling has been done with attention to the need of registrants for ample breaks and avoidance of fatigue.

- **Pretests** prior to each half day session. Answers are discussed during the faculty panel held at the end of each half day session.
- The **self-teaching laboratory**. Electrocardiograms, a variety of pictorials and other pertinent clinical material will be available for individual and group interactive study. Most of this information is presented in problem/case format to facilitate your retention.
- **Computer lab with 1500 single answer multiple choice questions** will be available for use throughout the course.
- **X-ray view boxes** will display 23 problem-based radiographic cases daily.
- **"Meet the Radiologist"** sessions will be available for one hour each evening to review the daily x-ray cases.
- **Challenge x-ray cases** to be discussed in a special session led by Thomas Keats, M.D., author of the textbook, *"Emergency Radiology."*
- **Review of PEER IV questions**. The 350 questions will be discussed with a focus on question construction and answer rationale. PEER IV books can be purchased on site at the same rate as available directly from ACEP.
- **Specific test-taking strategies** for oral and written boards will be presented by Carol Rivers, M.D., FACEP, founder and president of Emergency Medicine Educational Enterprises.
- **Interaction with faculty** will be available during lunches and evening workshops for case discussion and informal questions and answers.

Register Today — Enrollment is limited

**FOR FURTHER INFORMATION:** Conference Coordinator, Office of Continuing Education, Johns Hopkins Medical Institutions, Turner 20, 720 Rutland Avenue, Baltimore, Maryland 21205-2195 — (301) 955-2959.

A man is shown in profile, looking down and slightly to the right. He is wearing a dark shirt. The lighting is dramatic, with a strong red light source from the left and a blue light source from the bottom left, creating a high-contrast, moody atmosphere. The background is dark and indistinct.

## The Connection

The present, the future.  
A life. Changed by the diagnosis of HIV.

Caremark offers medical services to help deal with these changes. At home, or at our Caremark Connection center.

The Caremark Connection offers HIV treatment in a convenient, comfortable, private neighborhood center – medical therapies, nursing, pharmacy, connection with community services. And always respect and understanding.

Our highly trained staff includes HIV nurse specialists, clinical pharmacists, registered dietitians, and reimbursement coordinators, allowing us to administer many complex therapies, such as:

- Pentamidine (IV/Aerosol)
- Ganciclovir
- Amphotericin-B
- Fluconazole
- Acyclovir
- Blood Transfusions
- Enteral Nutritional Supplements
- Total Parental Nutrition (TPN)
- Antibiotics
- Analgesics
- Investigational Drugs

The Connection offers scheduling flexibility, privacy and convenience for prophylactic and chronic therapies. We provide the opportunity for patient networking and information, nutritional counseling and assessment, reimbursement counseling, and a nationwide service for travelers.

**Caremark Connection**  
1039 N. Calvert Street  
Baltimore, MD 21202  
(301) 752-4489

# CAREMARK

Affiliate Baxter Healthcare Corporation



# Executive Director's Newsletter

October 1991

---

## Erratum

---

The September issue of the *Executive Director's Newsletter (EDN)* contained an inadvertent typographical error in the "Medicare Fee Schedule" section. In the second letter from Marvin Schneider MD to Health Care Financing Administration Administrator Gail Wilensky PhD, an error not contained in the actual letter sent to Dr. Wilensky occurred. The actual letter sent read (correction in bold): "While I previously stated that it was **unrealistic** to think that the interpretation of EKGs requires little expertise, I want to ensure the clarity with which this comment was made." Med Chi regrets any confusion this misprint may have caused.

---

## Med Chi Position on Mandatory Testing

---

In August, Med Chi issued a press release reaffirming its position to oppose mandatory HIV testing for both health care workers and patients. The release was developed in response to an announcement by Governor Schaefer that he intends to pursue mandatory HIV testing for health care workers and patients. Citing lack of scientific evidence for the need to test health care workers as well as the exorbitant increase in health care costs that would result from testing health care workers and patients, the news release attempts to quell unfounded public fears of HIV transmission from physician to patient. As a result of the release, the following Maryland newspapers, radio and television stations featured stories on Med Chi's position:

### Newspapers

*The Baltimore Sun*, Baltimore  
*Daily Banner*, Cambridge  
*Harford Post*, Bel Air  
*Montgomery Sentinel*, Gaithersburg  
*News*, Hancock,  
*Prince George's Journal*, Lanham  
*Prince George's Sentinel*, Rockville  
*Sentinel*, Hyattsville  
*Star Democrat*, Easton

### Radio Stations

WBAL-AM, Baltimore  
WFMD-AM, Frederick  
WGRX-FM, Baltimore  
WHUR-FM, Washington  
WMAL-AM, Washington

### Television

WBAL-TV, Baltimore  
WJZ-TV, Baltimore

The release also mentioned Med Chi's efforts to develop a practice protocol for physicians with HBV/HIV. At press time, Med Chi's House of Delegates was scheduled to vote on the draft protocol on September 14, 1991. Pending Med Chi's approval, the protocol is scheduled to be presented to the Maryland Legislature on December 2, 1991 in accordance with H.B. 124 passed by the 1991 Maryland General Assembly.

Because of the possibility that legislation may be introduced in January 1992 that would mandate HIV testing for health care workers, all Med Chi physicians are encouraged to contact their Maryland legislators now and encourage them to vote against mandatory HIV testing. For a copy of the release, news clippings, or Med Chi's protocol for physicians with HIV, contact Betsy Newman, Public Relations Director at 301-539-0872 or 1-800-492-1056.

---

## Medicare Reimbursement

---

Because of enormous input from physicians, the Bush Administration recently announced that it will revise the Medicare Fee Schedule published in the July 29, 1991 *Federal Register* to soften the proposed reductions in Medicare reimbursements that would have cut millions of dollars in

Medicare payments to physicians. The new fee schedule, known as the Resource-Based Relative Value Scale (RBRVS), was intended to more equitably balance payments to undervalued services from those labeled by the RBRVS as over-valued services. The fee schedule, which was to be budget neutral, would have actually reduced physician payments by 16 percent thereby reducing overall payments by some eight billion dollars or more by 1996. Med Chi wishes to thank all the physicians who wrote to the Health Care Financing Administration (HCFA) and their US Representatives encouraging HCFA to reevaluate the new regulations. Med Chi intends to obtain a copy of the administration's new schedule and distribute it to component medical societies as soon as possible. For more information about the Medicare regulations, contact Roseanne M. Matricianni, Assistant Executive Director for Health Care Policy at 301-539-0872 or 1-800-492-1056.

---

### *Medicare Fraud*

---

The following message is provided by Maurice Hartman, Regional Administrator to the Health Care Financing Administration (HCFA), in an effort to improve communications about a Medicare fraud alert on waiver of coinsurance:

Physicians recently received a carrier Medicare bulletin which included a Fraud Alert concerning the waiver to Medicare deductibles and coinsurance. This alert, from the Inspector General's Office of the Department of Health and Human Services, indicated that the routine waiver of Medicare patient liability by physicians and suppliers of medical equipment and services may violate federal anti-kickback and false claim laws. The vast majority of physicians need not worry about occasionally deciding not to press for patient payment of the deductible or coinsurance if that decision is based on the patient's financial condition. In such cases, to avoid any question of a violation of the Medicare statute, physicians can follow a few simple principles.

1. Do not advertise your practice as one that routinely accepts the Medicare allowance as payment in full for services performed.
2. Provide each patient with a bill and attempt to collect coinsurance from the patient or third party payor.
3. Do not charge Medicare patients higher amounts than other patients.
4. If you waive the coinsurance or deductible in an individual case, make sure your action is based on the patient's financial condition.

It is not required that physicians make extraordinary attempts to collect from the patient. In those cases where a bill has been issued but the cost of continuing collection efforts could exceed or be disproportionate to the amount to be collected from a particular patient, the physician need not continue to press the patient. To be considered a reasonable collection effort, the effort to collect Medicare coinsurance and deductible amounts must be similar to that made to collect comparable amounts from non-Medicare patients.

Physicians who follow the above principles should not have a problem with violation of the federal anti-fraud rules.

---

### *Medicaid Provider Fee Project*

---

In August, the Bush Administration announced its intention to design regulations that would prevent Maryland (and other states) from implementing variations of a Medicaid Provider Fee Project (PFP). Med Chi will publish an update of the new federal regulations as soon as they are available. For questions regarding the PFP, contact Roseanne M. Matricianni, Assistant Executive Director for Health Care Policy, at 301-539-0872 or 1-800-492-1056.



---

## Physician Licensure Fees

---

The proposal to permanently increase physician licensure fees is expected to be published in a September issue of the *Maryland Register*. All Maryland physicians are encouraged to write to the Board of Physician Quality Assurance (BPQA) and formally express their concern regarding the drastic increase in licensure fees. The address of the BPQA is: Board of Physician Quality Assurance, P.O. Box 2571, Baltimore, MD 21215-0095.

---

## Safe Harbor Regulations

---

In the July 29, 1991 *Federal Register*, the Department of Health and Human Services published the final "safe harbor" regulations. These regulations, intended to define business arrangements and payment practices for physicians participating in Medicare and Medicaid, established ten safe harbors. Because these regulations went into effect immediately, Med Chi urges all physician to comply with the law. To help physicians understand these regulations, there will be an "Emergency Conference on the Safe Harbors: How to Structure Health Care Joint Ventures Under the Law" on October 11, 1991 from 9:30 am to 4:30 pm at the Columbia Inn, located at 10207 Wincopin Circle in Columbia, Maryland. Directions: I-95 to 175 West. After passing Route 29, go through five traffic lights. After the fifth light, turn left onto Wincopin Circle.

In addition to the conference, the fall issue of the *Physician's Practice Digest* will feature an article that provides more detailed information on these regulations. This issue is scheduled to be mailed on or about October 15, 1991. For questions concerning the safe harbors, contact Med Chi's Legal Department at 301-539-0872 or 1-800-492-1056. For a copy of the article, contact Med Chi's Communications Department at 301-539-0872.

---

## Physician Disclosure of Ownership of Health Care Services

---

Physicians are reminded that, effective July 1, 1991, Maryland law requires physicians to post a notice in their office(s) regarding ownership of health care services to which they refer patients. A disclosure of ownership sign was featured in the September issue of the *MMJ*. For additional copies of this sign, contact Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056.

---

## President's Regional Conferences

---

The **President's Regional Conference in western Maryland** will be held on Thursday, October 3, 1991 at 4:30 p.m. at the Sheraton Inn in Hagerstown. The conference will update Maryland physicians on important Med Chi issues including liability insurance and the AMA's Health Access America. Physicians will also have an opportunity to earn continuing medical education credits through a presentation on "Panic Disorder or Coronary Artery Disease?"

The **President's Regional Conference on the eastern shore** is scheduled for November 14, 1991 at 4:30 pm at the Cambridge Yacht in Cambridge. The President's Regional Conference for southern Maryland is scheduled for March 12, 1991. Watch the Executive Director's Newsletter for more information about these conferences or contact Norbert Picha, Med Chi Deputy Executive Director, at 301-539-0872 or 1-800-492-1056.

---

## Drug Conference

---

Med Chi's "Second Annual Conference on Addiction: Prevention, Recognition and Treatment" will be held on Saturday, November 16, 1991 in the Med Chi Faculty Building. The conference will help physicians care for patients with addiction problems and fulfills seven continuing medical education credits. The first 150 registrants to the conference will receive a

free copy of the 1990 addiction conference monograph. A program and a registration form for this conference follow this newsletter.

---

### *Japanese Visit*

---

On October 15, 1991, a delegation of Japanese physicians will visit Med Chi to exchange information on "Health Care of the Elderly in the U.S. and Japan." The physician delegation is part of a group of more than 130 Japanese representatives from the Kanagawa Prefecture. For more information about the visit, see the article on pages 865-865 of this *MMJ*.

---

### *Doctor/Lawyer/ Teacher Partnership*

---

Physicians in Harford County and Baltimore City are needed to spend a few hours of their time to help prevent drug abuse among Maryland's children. As a physician volunteer in the Doctor/Lawyer/Teacher Partnership Against Drugs you will visit a classroom of students in your area to discuss medical dangers of using drugs. Your lawyer partner will emphasize the legal consequences of drug use. To volunteer or for more information, contact Betsy Newman, Public Relations Director, at 301-539-0872.

---

### *Awards Announced at Semiannual Meeting*

---

During the House of Delegates session at the 1991 Semiannual meeting Med Chi announced that "Venomous Snakebites" by Barry S. Gold MD and Robert A. Barish MD won the 1990 *Maryland Medical Journal* best article award. Med Chi also announced the following winners of the 1991 Medical Awards for Excellence in Medical Journalism:

#### **Daily Newspaper Category**

"AIDS: 10 Years Later," by Sue Miller, *The Evening Sun*

#### **Non-Daily Newspaper Category**

"The Wounded Healer," by Hollis Paschen, *The Columbia Flyer*

#### **Radio Category**

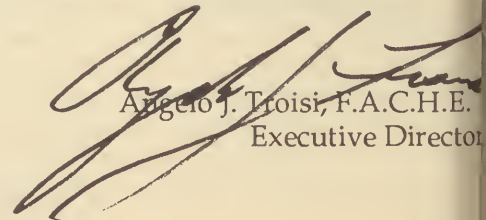
"The Cancer Nobody Talks About," by Merrie Street, WPOC-FM

---

### *Annual Meeting*

---

Mark your calendars! Med Chi's 1992 Annual meeting will be held Thursday-Saturday, April 30-May 1 at the Omni International Hotel in Baltimore. Watch the Executive Director's Newsletter for more meeting and program information.



Angelo J. Troisi, F.A.C.H.E.  
Executive Director



The following letter from Nelson Sabatini, Secretary, Department of Health and Mental Hygiene, was sent to all Maryland physicians in the August, 1991 Communicable Disease Bulletin. The Medical and Chirurgical Faculty of Maryland is pleased to support the efforts of Governor Schaefer and the Department of Health and Mental Hygiene in making Maryland "Measles-Free." We encourage the cooperation of all health care providers to appropriately immunize their patients and to assure the immunity of the staff in their health care facilities.

## Measles-Free Maryland

Dear Doctor,

I would like to call to your attention that Governor William Donald Schaefer has been concerned about the resurgence of measles in Maryland over the past three years. He has directed the Maryland Department of Health and Mental Hygiene to plan a campaign to help stop this vaccine preventable disease.

Governor Schaefer's campaign for a **Measles-Free Maryland** will begin the week of September 21-27, 1991. The timing has been chosen to coincide with the National Immunization Week being sponsored by the Children's Action Network and the American Academy of Pediatrics. Their theme, which will be echoed in Maryland, will be "Before it's too late: Vaccinate!" An outline of the Governor's Campaign is as follows:

### Problem:

- » Between January, 1989, and July, 1991, 493 cases of measles were reported in Maryland. Approximately 30% of people with measles were hospitalized.
- » Unvaccinated preschoolers, teen-age school children (who had had one dose of measles vaccine) and young adult health care workers were hit the hardest. Health care facilities became sites of measles transmission.

### Messages to Parents:

- » All preschoolers should get their first dose of measles vaccine (as MMR) at 15 months of age.
- » All school-age children should get a second dose of measles vaccine (as MMR) either at entry to kindergarten, or at entry to middle school (10-12 years old). This recommendation for a second dose at kindergarten entry is new in Maryland--we hope to speed the process of immunizing all school-age children. Parents should have their child's school record updated to reflect receipt of the second dose.
- » All college enterers should get a second dose unless they have received a second dose earlier.

### Messages to Health Care Workers:

- » Give age-appropriate vaccination to all children.
- » Remove barriers to vaccination by: increasing hours of availability; having walk-in immunization clinics; offering vaccines at cost; omitting a pre-vaccination physical exam, etc.
- » Recall children ready to enter middle school for their second dose.
- » Ensure that health care facilities do not serve as sites for measles transmission by appropriate isolation and triage, and assuring measles immunity of all employee and volunteer health care workers.

### Timing:

- » September 21-27, 1991; September 23, 1991 kick-off, and activities following.

### Activities:


- » Press release and press conference; mailings; extended hours of clinics at local health departments, etc.

### Associated Activities:

- » Regulations are being written in conjunction with the Medical and Chirurgical Faculty's Subcommittee on Immunization and Infectious Disease that, as proposed, will require a second dose of measles vaccine for those students entering kindergarten and those entering sixth grade in the fall of 1992.
- » Regulations are being written to require measles immunity for each new employee and volunteer working 20 hours or more per week in Maryland hospitals.

You are invited to work together with the Department of Health and Mental Hygiene and all of Maryland's health care providers and citizens to **Make Maryland Measles-Free !**

Sincerely,

  
Nelson Sabatini  
Secretary

Saturday, November 16, 1991  
Med Chi Faculty Building, 1211 Cathedral Street, Baltimore, MD 21201

## Program

- 8:00 a.m. – 8:45 a.m. **REGISTRATION/CHECK-IN**  
(continental breakfast)
- 8:45 a.m. – 9:00 a.m. **OVERVIEW**
- 9:00 a.m. – 10:00 a.m. **THE ROLE OF THE PRIMARY CARE PHYSICIAN IN THE TREATMENT OF CHEMICAL DEPENDENCE** *Dan H. McDougal, M.D.*, Med Chi Physician Rehabilitation Committee
- 10:00 a.m. – 11:00 a.m. **ASSESSMENT AND TREATMENT OF ALCOHOLISM IN DIFFERENT AGE GROUPS** *Franklin T. Evans, M.D.*, Chair, Med Chi Committee on Alcoholism and Chemical Dependency
- 11:00 a.m. – 11:15 a.m. **BREAK**
- 11:15 a.m. – 12:15 p.m. **CONCURRENT SESSIONS**  
Session A: **SEXUAL EXPLOITATION OF PATIENTS: EVALUATION AND TREATMENT OF SEXUAL ADDICTION** *Richard Irons, M.D.*, Medical Coordinator, Professional Assessment Program, Golden Valley Treatment Center, Golden Valley, Minnesota  
Session B: **ASSESSMENT OF ADOLESCENT CHEMICAL DEPENDENCY** *Rev. Edward Reading, M.Div.*, NCAC II, Assistant Director, Physicians' Health Program, Medical Society of New Jersey  
Session C: **PREVENTING PHYSICIAN IMPAIRMENT** *Susan Kalia, M.D., M.P.H.*, Director, University Health Services, The Johns Hopkins University School of Medicine
- 12:15 p.m. – 1:30 p.m. **LUNCH**
- 1:30 p.m. – 2:30 p.m. **THE IMPAIRED PHYSICIAN** *Penelope Zeigler, M.D.*, Medical Director, Pennsylvania Medical Society Physician Health Program
- 2:30 p.m. – 3:30 p.m. **CONCURRENT SESSIONS**  
Session A: **DRUG TESTING FOR PHYSICIANS AND OTHER HEALTH PROVIDERS** *Stanley R. Platman, M.D.*, Vice-President Medical Affairs and Chief of Psychiatry, Homewood Hospital Center; Chair, Med Chi Physician Rehabilitation Committee  
Session B: **THE HIV POSITIVE PHYSICIAN** *Fred C. Gill, M.D.*, Chair, Med chi Committee on AIDS and *John Bartlett, M.D.*, Vice-Chair, Med Chi Committee on AIDS  
Session C: **UTILIZING A TRADITIONAL ADDICTION TREATMENT APPROACH IN THE TREATMENT OF EATING DISORDERS** *Townsend Pennington, M.D.*, Medical Director, The Willough at Naples, Naples, Florida
- 3:30 p.m. – 3:45 p.m. **BREAK**
- 3:45 p.m. – 5:45 p.m. **HOW TO HELP YOUR PATIENTS STOP SMOKING** *Kevin Ferentz, M.D.* Assistant Professor, Department of Family Medicine, University of Maryland School of Medicine, and *Carmine Valente, Ph.D.*, Deputy Executive Director, Medical and Chirurgical Faculty of Maryland

**For more information call Vivian Smith at (301)539-0872 or 1-800-492-1056.**

### Registration Form:

Second Annual Conference on Addiction: Prevention, Recognition & Treatment

- check one:
- ☐ Med Chi members - \$50      ☐ Physician non-members - \$100
- ☐ Allied Health Professionals - \$25      ☐ Students and residents - NO CHARGE.

Last										First										M.I.											
Name:																															
Address:																															
City:																State:				Zip:											
Visa:																Exp. Date:															
Signature: _____																Phone: _____															

Signature required if paying by VISA

Please circle your breakout session preference: (refer to schedule for topic)

11:15 a.m. - 12:15 p.m.  
A B

2:30 p.m. – 3:30 p.m.

Send this form, along with your VISA number, a check or money order made payable to **Med Chl** to:  
Med Chl Addictions Conference, ATTN: Vivian Smith, 1211 Cathedral Street, Baltimore, MD 21201

The Medical and Chirurgical Faculty designates this continuing medical education activity for 7 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

**Sponsored by Med Chi's Physician Rehabilitation Committee  
in cooperation with the  
Committee on Alcoholism and Chemical Dependency**



# BEFORE YOU BUY INSURANCE, WE RECOMMEND YOU SEE A DOCTOR



Word-of-mouth is our best advertising. So we urge you: get the word.

Talk to any of the 13,000 doctors with professional liability insurance from The P·I·E Mutual.

These doctors own this company. More than 160 of them sit on our 13 managing boards. They help to shape policy,

influence selection of applicants, consider the merits of claims.

They're benefactors of a program that offers discounts to loss-free members. And the protection of a prepaid law firm that is seasoned in all areas of claims, and wins 90% of cases that go to court.

Call us.  
1-800-228-2335. Get the facts, doctor to doctor.



---

THE P·I·E MUTUAL  
INSURANCE COMPANY

---

NORTH POINT TOWER  
1001 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114-1149



WINTERICH-NEFF & ASSOCIATES  
7 EAST REDWOOD, SUITE 810  
BALTIMORE, MARYLAND 21202  
301-234-2800

## Japanese Physician Delegation to Visit Maryland

On October 14-18, the Governor of Kanagawa, Japan, Kazuji Nagasu, will lead a delegation of more than 130 Japanese representatives to Maryland to visit professional and business associations. Among the delegation will be a group of twenty-five physicians and health care representatives from the public health department of the Kanagawa Prefectural Government and the Kanagawa Prefectural Medical, Dental, and Pharmacists Associations. The physician delegation will visit Med Chi on Tuesday, October 15, 1991 to learn about the organization and management of Med Chi, to include acquisition of medical licenses, medical insurance systems, and emergency medical systems.



(Left to right) Muraji Nakazawa, Kanagawa Medical Association President Ryohei Kawaguchi MD, Hiroshi Nakazawa MD, and Kanagawa Prefecture Medical Study Group President Hirotake Komiya



(Left to right) Maryland Governor William Donald Schaefer, Hiroshi Nakazawa MD, and Kanagawa Governor Kazuji Nagasu

The theme for this year's delegation is "Health Care of the Elderly in the US and Japan" and will focus on several economic and medical aspects of caring for senior citizens. During their visit, Japanese representatives will attend a number of meetings designed to address housing, health care, and educational and service needs of the elderly. Japanese physicians are scheduled to visit The Johns Hopkins University School of Medicine Geriatric Center, the National Institutes of Health - Center for Aging, and the University of Maryland.

This year marks the tenth anniversary of Maryland's sister state relationship with Kanagawa Prefecture, Japan, which is located just south of Tokyo. Since 1980, the Prefecture has sponsored the visit of a



medical services study group to various institutions in the US to study their medical systems, meet with physicians and other medical professionals, and promote goodwill within the medical community.

As part of the tenth anniversary celebration, Maryland Governor William Donald Schaefer led a delegation to Kanagawa in June 1991. Med Chi's Public Relations Committee Chairman, Hiroshi Nakazawa MD, a member of Maryland's Kanagawa Sister State Committee, traveled with the Maryland delegation as its physician representative. During the visit, Dr. Nakazawa met with President of the Japan Medical Association, Haruto Haneda MD, and the President of the Kanagawa Medical Association, Ryohei Kawaguchi MD, as well as several Kanagawa Medical Association Board members. These physicians will be part of the Japanese Delegation visiting Maryland in October.



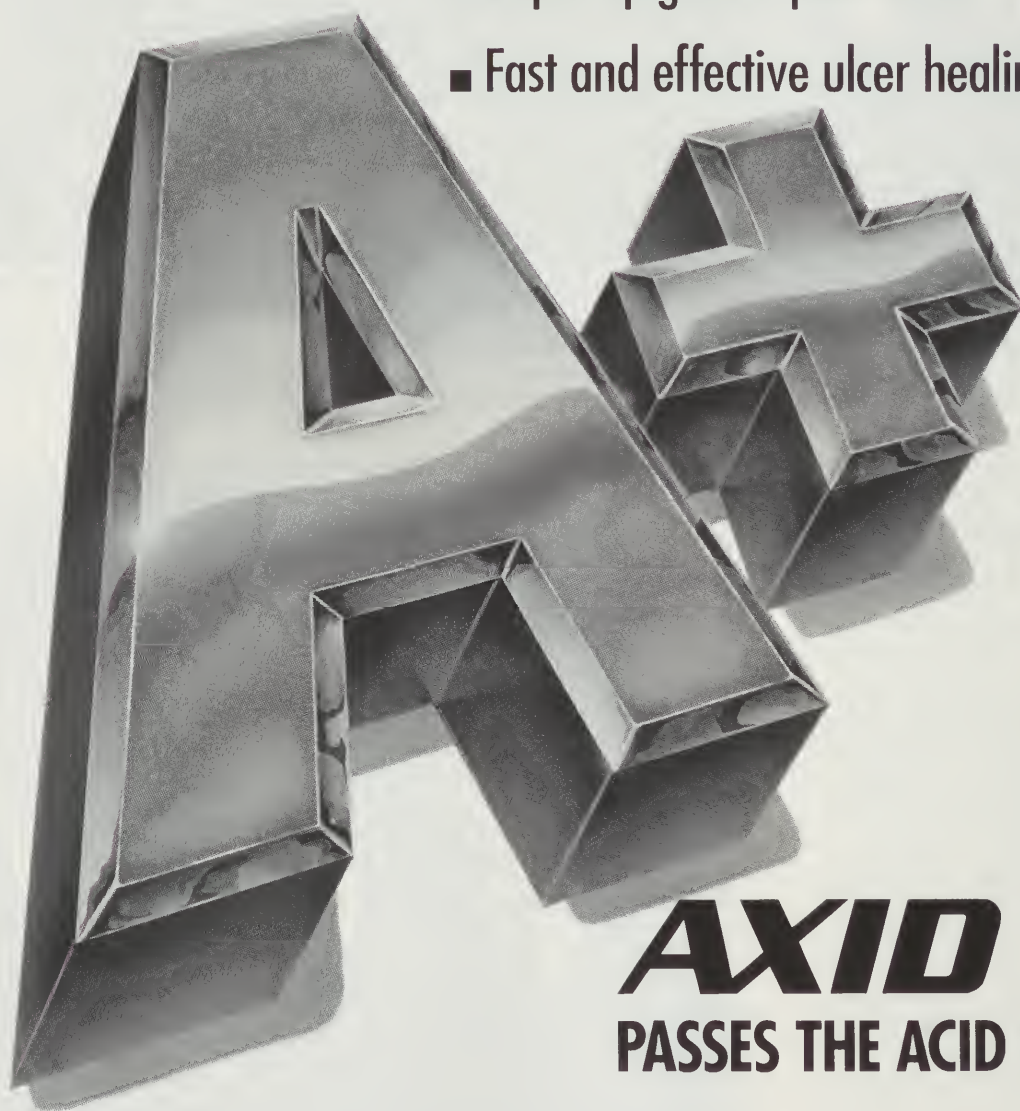
(Left to right) Hiroshi Nakazawa MD presents a Maryland flag to Japan Medical Association President Haruto Haneda MD

Their main interests include home health care, medical waste management, physician quality assurance, and medical liability insurance.

For excellent response in the treatment of  
duodenal ulcers...

# **AXID**<sup>®</sup> nizatidine has the right answers

- Rapid epigastric pain relief<sup>1,2\*</sup>
- Fast and effective ulcer healing<sup>2,3,4</sup>



**AXID**  
**PASSES THE ACID TEST**

\*Most patients experience pain relief with the first dose.  
See adjacent page for references and brief summary  
of prescribing information.



## AXID® (nizatidine capsules)

**Brief Summary:** Consult the package insert for complete prescribing information.  
**Indications and Usage:** 1. Active duodenal ulcer—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

2. Maintenance therapy—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than 1 year are not known.

**Contraindications:** Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H<sub>2</sub>-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H<sub>2</sub>-receptor antagonists.

**Precautions:** General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.  
3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of Axid is similar to that in normal subjects.

**Laboratory Tests:** False-positive tests for urobilinogen with Multistix® may occur during therapy.

**Drug Interactions:** No interactions have been observed with theophylline, chlorazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C:** Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers:** Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**Use in Elderly Patients:** Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic:** Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular:** In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS:** Rare cases of reversible mental confusion have been reported.

**Endocrine:** Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic:** Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumentary:** Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity:** As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other:** Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

**Overdose:** Overdoses of Axid have been reported rarely. If overdose occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

PV 2091 AMP  
[091190]

### References

1. Data on file, Lilly Research Laboratories.
2. Scand J Gastroenterol. 1987;22(suppl 136):61-70.
3. Scand J Gastroenterol. 1987;22(suppl 136):47-55.
4. Am J Gastroenterol. 1989;84:769-774.

NZ-2943-8-149347

Additional information available to the profession on request.

*Lilly*

**Eli Lilly and Company**  
Indianapolis, Indiana  
46285

## Professional Employment, Inc.

SPECIALIZING IN RECRUITMENT FOR THE MEDICAL PROFESSION

*Beverly F. Epstein, MPA*

### When you need Experienced, Qualified, Permanent:

- Medical Secretaries
- Medical Transcribers
- Receptionists
- Medical Assistants
- Billing/Insurance Secretaries
- Office Managers

## PROFESSIONAL EMPLOYMENT, INC.

(301) 560-2646

**FEE:** Permanent Placement - a one time fee of \$750.00 per placement.

**TERMS:** Permanent Personnel are placed with a one month 'grace' period which is in effect from starting date. If employment is not mutually satisfactory during this time period, additional qualified applicants will be submitted and/or a full credit will be applied only after receipt of payment.

## When you can buy any home, here's why you'll choose a Villager.



**1.** Villager offers the finest homesite

locations—in Green Spring Valley communities as well as Worthington Park and the Falls Road corridor. We'll also build your home on your lot...with our plans or yours. **Below market financing.**

**2.** Breathtaking estate-size home designs, and the reputation for using the very finest materials and craftsmen.

**3.** The opportunity to work one on one

with our designers. We'll custom build from your designs or from ours. Our new 1991 designs include the Euro Classic I Award of Excellence recipient from the Homebuilders Association of Maryland and the next generation of our Euro Classic series. Call now. We're building just a few homes for 1991, from \$290,000 to over \$1 million. Phone Sandy Marenberg or Karen Pine for a personal consultation.

**Ruxton**—Knollcrest Farms at Hillstead and Huntspring  
**Pikesville**—Helmsley Court, Anton North II—(Merry Hill)  
**Owings Mills**—Worthington Park and Foxchase  
**Stevenson**—Greenspring Subdivision



**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

**Brokers  
Protected**

McDonogh Crossroads Office Park  
20 Crossroads Drive, Suite 113 • Owings Mills, MD 21117  
Phone: (day) 363-0963 (evening) 602-0820

# Maryland's newest physical rehab center already has 20 years experience.



Baltimore is a city known internationally for its outstanding medical care. Now the tradition continues with the addition of the new Maryland General-Bryn Mawr Rehab Center at Maryland General Hospital. This specialty center for physical medicine and rehabilitation offers Bryn Mawr Rehab's 20 years of experience and leadership in the field of rehabilitation medicine.

The partnership between Maryland General Hospital and Bryn Mawr Rehab is truly unique. For the first time in Maryland, two high quality institutions with long histories of health care achievement are coming together to make a major commitment to rehabilitation medicine.

The Maryland General-Bryn Mawr Rehab Center, the region's most modern and conveniently located rehabilitation facility, provides a continuum of care in physical and cognitive rehabilitation services

including brain injury, stroke, orthopedics, arthritis, amputee services and multiple sclerosis, among others.

Most importantly, everyone on the Maryland General-Bryn Mawr Rehab team is personally and professionally dedicated to helping patients reach their highest level of independence. Our guiding philosophy is team-centered care, focused upon the individual needs of our patients and their families. This is what makes Maryland General-Bryn Mawr Rehab Center a very special place for rehabilitation care.

To learn more about Maryland General-Bryn Mawr Rehab Center or to arrange a tour, please call Mary Filippelli our administrative director at (301) 225-8380.

Maryland General-Bryn Mawr Rehab Center. We're the new team in town with lots of experience.

 **MARYLAND GENERAL  
BRYN MAWR REHAB CENTER**

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380



---

# The Maryland Lupus Foundation: A Commitment to Professional Education

---

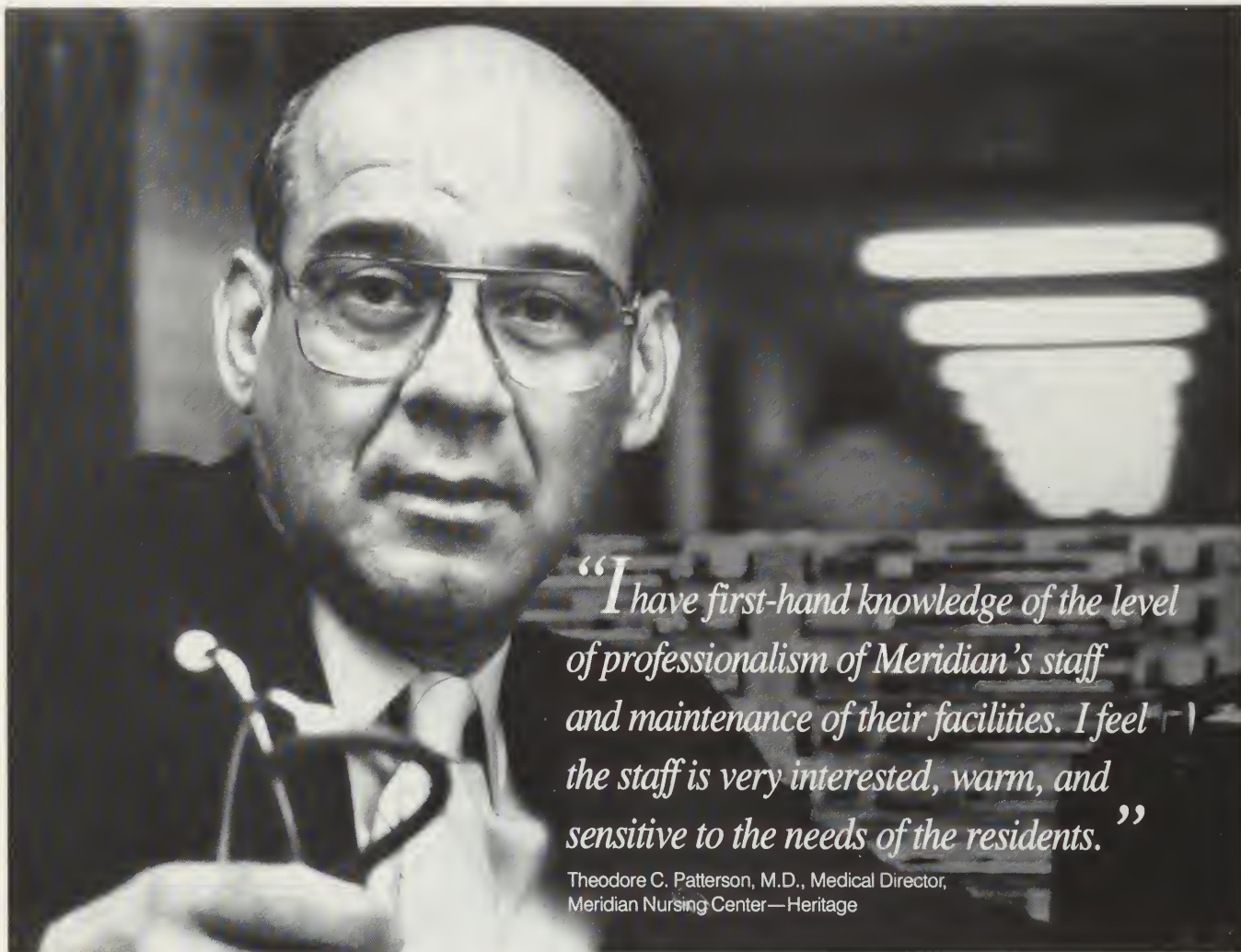
Mary Betty Stevens MD

---

*Dr. Stevens is Chairman of the Medical Advisory Committee of The Maryland Lupus Foundation.*

Systemic lupus erythematosus (SLE) is no longer a disorder considered the province of a few in ivory towers. It has come to be recognized as an autoimmune, immune-complex disease of such variable presentation and clinical problems that it necessarily belongs to generalists and multiple specialists, medical physicians and surgeons, and a cadre of allied health professionals.

Several years ago (1983-1984), a series of articles on SLE was published in this journal (vols. 32 and 33) relative to the clinical diagnosis and management of SLE. Now, in October 1991 (Lupus Awareness Month), the Maryland Lupus Foundation has collaborated with the *Maryland Medical Journal* in preparing this issue which is devoted to an update of SLE with emphasis on its clinical spectrum, autoantibody profile, special problems, and management. In this way, the Maryland Lupus Foundation intends to extend its commitment to professional education; and we, the authors, hope to provide you with a valuable resource, regardless of your multiple specific interests. Furthermore, we extend to you the opportunity for your patients (and your office staff) to obtain added patient-related informational publications relative to SLE from the Foundation. ■



*"I have first-hand knowledge of the level of professionalism of Meridian's staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents."*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### ***Partners in Healthcare***

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer's patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there's our full-time activity directors, social workers, and dieticians—all of whom are specialists in geriatric care.

Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.





---

# The History of Lupus Erythematosus

---

Marc C. Hochberg MD, MPH

---

*Dr. Hochberg is Professor of Medicine, Epidemiology and Preventive Medicine, The University of Maryland School of Medicine, Baltimore, MD.*

---

*The history of lupus can be divided into the classical period which saw the description of the cutaneous disorder, the neoclassical period which saw the description of the systemic or disseminated manifestations of lupus, and the modern period which was heralded by the discovery of the lupus erythematosus cell in 1948.*

---

**T**he history of lupus erythematosus (LE) has been reviewed in both of the major textbooks on this disease<sup>1,2</sup> and was the subject of an article in this journal in 1983.<sup>3</sup> This article concentrates on developments in the present century which have logarithmically expanded our knowledge about the pathophysiology, clinical-laboratory features, and treatment of this disorder.

The history of lupus can be divided into three periods: the classical period which saw the description of the cutaneous disorder, the neoclassical period which saw the description of the systemic or disseminated manifestations of lupus, and the modern period which was heralded by the discovery of the LE cell in 1948 and is characterized by the scientific advances noted above. The history of lupus during the classical period was reviewed by Smith and Cyr in 1988.<sup>4</sup> Of note are the derivation of the term lupus and the clinical descriptions of the cutaneous lesions of lupus vulgaris, lupus profundus, discoid lupus, and the photosensitive nature of the malar or butterfly rash. The term lupus (Latin for wolf) is attributed to the thirteenth century physician Rogerius who used it to describe erosive facial lesions that were reminiscent of a wolf's bite.<sup>1,3</sup> Classical descriptions of the various dermatologic features of lupus were made by Thomas Bateman, a student of the British dermatologist Robert William, in the early nineteenth century; Cazenave, a student of the French dermatologist Laurent Bielt, in the mid-nineteenth century; and Moriz Kaposi (born Moriz Kohn), student and son-in-law of the Austrian dermatologist Ferdinand von Hebra, in the late nineteenth century. The lesions now referred to as discoid lupus were described in 1833 by Cazenave under the term erythema centrifugum, while the butterfly distribution of the facial rash was noted by von Hebra in 1846. The first published illustrations of lupus erythematosus were included in von Hebra's text, *Atlas of Skin Diseases*, published in 1856.

The neoclassical era of the history of lupus began in 1872 when Kaposi first described the systemic nature of the disorder:

... experience has shown that lupus erythematosus ... may be attended by altogether more severe pathological changes ... and even dangerous constitu-

tional symptoms may be intimately associated with the process in question, and that death may result from conditions which must be considered to arise from the local malady.<sup>5</sup>

Kaposi proposed that there were two types of lupus erythematosus: the discoid form and a disseminated form. Furthermore, he enumerated various symptoms and signs which characterized the disseminated form including (1) subcutaneous nodules, (2) arthritis with synovial hypertrophy of both small and large joints, (3) lymphadenopathy, (4) fever, (5) weight loss, (6) anemia, and (7) central nervous system involvement.<sup>5</sup>

The existence of a disseminated or systemic form of lupus was firmly established by the work of Osler in Baltimore<sup>6</sup> and Jadassohn in Vienna<sup>7</sup> in 1904. Over the next thirty years, pathologic studies documented the existence of nonbacterial verrucous endocarditis (Libman-Sacks disease)<sup>8</sup> and wire-loop lesions in patients with glomerulonephritis;<sup>9</sup> such observations at the autopsy table lead to the construct of collagen disease proposed by Kemperer and colleagues in 1941.<sup>10</sup> This terminology, collagen vascular disease, persists in usage now fifty years after its introduction.

The sentinel event in the mid 1900s which heralded the modern era was the discovery of the LE cell by Hargraves and colleagues in 1948.<sup>11</sup> The investigators observed these cells in the bone marrow of patients with acute disseminated lupus erythematosus and postulated that the cell "... is the end result of... phagocytosis of free nuclear material with a resulting round vacuole containing this partially digested and lysed nuclear material ...." This discovery ushered in the present era of the application of immunology to the study of lupus erythematosus. Two other immunologic markers were recognized in the 1950s as being associated with lupus: the biologic false-positive test for syphilis<sup>12</sup> and the immunofluorescent test for antinuclear antibodies.<sup>13</sup> Moore, working in Baltimore, demonstrated that systemic lupus developed in 7 percent of 148 subjects with chronic false-positive tests for syphilis and that a further 30 percent had symptoms consistent with collagen diseases.<sup>12</sup> Friou applied the technique of indirect immunofluorescence to demonstrate the presence of antinuclear antibodies in the blood of patients with systemic lupus.<sup>13</sup> Subsequently, the recognition of antibodies to deoxyribonucleic acid (DNA)<sup>14</sup> and the description of antibodies to extractable nuclear antigens<sup>15</sup> expanded the scope of immunodiagnostic laboratory tests in lupus. Presently, patients with systemic lupus are routinely studied for the presence of antinuclear antibodies, including antibodies to double-stranded DNA and extractable nuclear antigens (nuclear ribonucleoprotein (nRNP), Sm, Ro, La), and anticardiolipin antibodies; these autoantibodies are useful in describing clinical subsets and understanding the etiopathogenesis of lupus.

Two other major advances in the modern era have

been the development of animal models of lupus and the recognition of the role of genetic predisposition to the development of lupus. The first animal model of systemic lupus was the F1 hybrid New Zealand Black/New Zealand White mouse.<sup>16</sup> This murine model has provided many insights into the immunopathogenesis of autoantibody formation, mechanisms of immunologic tolerance, the development of glomerulonephritis, the role of sex hormones in modulating the course of disease, and evaluation of treatments including recently developed biologic agents such as anti-CD4 antibodies among others. Other animal models that have been used to study systemic lupus include the BXSB and MRL/lpr mice, and the naturally occurring syndrome of lupus in dogs.<sup>17</sup>

The familial occurrence of systemic lupus was first noted by Leonhardt in 1954 and later studied by Arnett and Shulman at Johns Hopkins.<sup>18</sup> Subsequently, familial aggregation of lupus, the concordance of lupus in monozygotic twin pairs, and the association of genetic markers with lupus have been described over the past twenty years.<sup>19</sup> Presently, molecular biology techniques are being applied to the study of human lymphocyte antigen (HLA) Class II genes to determine specific amino acid sequences in these cell surface molecules that are involved in antigen presentation to T-helper cells in patients with lupus. These studies have already resulted in the identification of genetic-serologic subsets of systemic lupus that complement the clinico-serologic subsets noted earlier. It is hoped by investigators working in this field that these studies will lead to the identification of etiologic factors (e.g., viral antigens/proteins) in systemic lupus.

Finally, no discussion of the history of lupus is complete without a review of the development of therapy. Payne, in 1894, first reported the usefulness of quinine in the treatment of lupus.<sup>20</sup> Four years later, the use of salicylates in conjunction with quinine was also noted to be of benefit.<sup>21</sup> It was not until the middle of this century that the treatment of systemic lupus was revolutionized by the discovery of the efficacy of adrenocorticotrophic hormone and cortisone by Hench.<sup>22</sup> Presently, corticosteroids are the primary therapy for almost all patients with systemic lupus. Antimalarials are used principally for patients with skin and joint involvement on the one hand and cytotoxic/immunosuppressive drugs are used for patients with glomerulonephritis, systemic vasculitis, and other severe life-threatening manifestations on the other.<sup>23</sup> Currently, newer biologic agents are being investigated in treating patients with lupus.

Thus, the history of lupus, although dating back at least to the Middle Ages, has experienced an explosion in this century, especially during the modern era over the past forty years. It is hoped that this growth of new knowledge will allow a better understanding of the immunopathogenesis of the disease and the development of more effective treatments.



## References

1. Lahita RG. Introduction. In: Lahita RG, ed. *Systemic Lupus Erythematosus*. New York: John Wiley and Sons. 1987; 1-3.
2. Talbott JH. Historical background of discoid and systemic lupus erythematosus. In: Wallace DJ, Dubois EL, eds. *Lupus Erythematosus*. Philadelphia: Lea & Febiger. 1987; 3-11.
3. Boltzer JW. Systemic lupus erythematosus. I. Historical aspects. *Md State Med J* 1983; 37:439.
4. Smith CD, Cyr M. The history of lupus erythematosus from Hippocrates to Osler. *Rheum Dis Clin North Am* 1988; 14:1.
5. Kaposi MH. Neue Beitrage zur Keantiss des lupus erythematosus. *Arch Dermatol Syphilol* 1872; 4:36.
6. Osler W. On the visceral manifestations of the erythema group of skin diseases (third paper). *Am J Med Sci* 1904; 127:1.
7. Jadassohn J. Lupus erythematosus. In: Mracek F, ed. *Handbuch der Hautkrankheiten*. Wien: Alfred Holder. 1904; 298-404.
8. Libmann E, Sacks B. A hitherto undescribed form of valvular and mural endocarditis. *Arch Intern Med* 1924; 33:701.
9. Baehr G, Klemperer P, Schiffrin A. A diffuse disease of the peripheral circulation usually associated with lupus erythematosus and endocarditis. *Trans Assoc Am Physicians* 1935; 50:139.
10. Klemperer P, Pollack AD, Baehr G. Pathology of disseminated lupus erythematosus. *Arch Path (Chicago)* 1941; 32:569.
11. Hargraves MM, Richmond H, Morton R. Presentation of two bone marrow elements: The tart cell and the LE cell. *Proc Staff Meet Mayo Clin* 1948; 23:25.
12. Moore JE, Lutz WB. The natural history of systemic lupus erythematosus: An approach to its study through chronic biological false positive reactions. *J Chron Dis* 1955; 2:297.
13. Friou GJ. Clinical application of lupus serum nucleoprotein reaction using fluorescent antibody technique. *J Clin Invest* 1957; 36:890.
14. Deicher HR, Holman HR, Kunkel HG. The precipitin reaction between DNA and a serum factor in SLE. *J Exp Med* 1959; 109:97.
15. Tan EM, Kunkel HG. Characteristics of a soluble nuclear antigen precipitating with sera of patients with systemic lupus erythematosus. *J Immunol* 1966; 96:404.
16. Bielschowsky M, Helyer BJ, Howie JB. Spontaneous haemolytic anemia in mice of the NZB/BL strain. *Proc Univ Otago Med School* 1959; 37:9.
17. Hahn BH. Animal models of systemic lupus erythematosus. In: Wallace DJ, Dubois EL, eds. *Lupus Erythematosus*. Philadelphia: Lea & Febiger. 1987; 130-57.
18. Arnett FC, Shulman LE. Studies in familial systemic lupus erythematosus. *Medicine* 1976; 55:313.
19. Hochberg MC. The application of genetic epidemiology to systemic lupus erythematosus. *J Rheumatol* 1987; 14:867-9.
20. Payne JF. A post-graduate lecture on lupus erythematosus. *Clin J* 1894; 4:223.
21. Radcliffe-Crocker. Discussion on lupus erythematosus. *Br J Dermatol* 1898; 10:375.
22. Hench PS. The reversibility of certain rheumatic and non-rheumatic conditions by the use of cortisone or of the pituitary adrenocorticotrophic hormone. *Ann Intern Med* 1952; 36:1.
23. Lockshin MD. Therapy for systemic lupus erythematosus. *N Engl J Med* 1991; 324:189. ■

## The Johns Hopkins Hospital



### PHYSICAL THERAPY OCCUPATIONAL THERAPY PHYSIATRY CONSULTATION SERVICE

Providing Rehabilitation Services  
including specialties in the areas of:

#### SPINE REHABILITATION

- Spinal evaluation and treatment
- Back School Education
- Postoperative back evaluation and treatment

#### ORTHOPEDICS

- Postoperative joint rehabilitation
- Rehabilitation of musculoskeletal injury
- Foot Orthotic evaluation/fabrication
- Prosthetic training
- TMJ

#### PEDIATRICS

- Evaluation and treatment of premature infants through adolescents
- Cystic Fibrosis Pulmonary and Exercise Programs

#### NEUROSCIENCES

- Chronic Pain Management
- Evaluation and treatment of neurological disorders
- Geriatric Fall Precautions Screening
- Multiple Sclerosis Patient Screening

#### MEDICINE

- Geriatric Assessment
- Arthritis evaluation and treatment
- High Risk Pregnancy
- AIDS Rehabilitation

#### SURGERY

- Amputee Rehabilitation
- Early postoperative intervention
- Postoperative organ transplantation rehabilitation

#### ONCOLOGY

- Rehabilitation Post Bone Marrow Transplantation
- Leukemia Rehabilitation

#### CARDIAC REHABILITATION

- Postoperative intervention
- Postoperative Heart, Lung and Heart/Lung Transplant Rehabilitation
- Phase 1 Cardiac MI program

#### PSYCHIATRY

- Pediatrics through Geriatrics
- Inpatient, Day Hospital, Outpatient

#### HANDS

- Static and Dynamic Orthotics
- Hand Surgery/Cumulative Trauma Rehabilitation

### THE JOHNS HOPKINS HOSPITAL

For more information on our inpatient and outpatient programs contact:

**The Rehabilitation Medicine Department**

Osler 159

600 North Wolfe Street

Baltimore, Maryland 21205

(301) 955-5693

# QUALITY

## THE HOPKINS TRADITION

# THE TEST OF PROFESSIONAL LIABILITY COVERAGE ISN'T WHEN YOU BUY IT.

Now Maryland physicians can get coverage from the carrier that offers a

**IT'S WHEN  
YOU USE IT.**

stronger support system at the critical time of need than any other company serving the region.

The carrier is the successful physician-owned National Capital Reciprocal Insurance Company: NCRIC.

The leading professional liability carrier in D.C. now comes to Maryland offering unique approaches to service and protection, all at Maryland rates.

For example, you'll be assigned your own NCRIC claims representative who serves substantially fewer clients

than reps with other carriers. So, in claims and underwriting, you'll get

faster, more personal attention to any question or problem, minor or major.

NCRIC also offers especially attractive coverages for physicians just starting a practice, those practicing in

two or more jurisdictions (D.C., MD, VA) part-time practitioners, and physicians who take maternity leave.

Learn more about the ways NCRIC demonstrates a sensitivity to the needs of the medical community in ways no other carrier does. Call (301) 424-8136.

**NCRIC**  
**MARYLAND**

**National Capital Reciprocal Insurance Company**  
7200 Wisconsin Ave., Suite 410, Bethesda, MD 20814



---

# The Clinical Spectrum of SLE

---

Mary Betty Stevens MD

---

*Dr. Stevens is Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD.*

**D**uring this century, there have been enormous developments at every level relative to lupus erythematosus. First and foremost, what was earlier a dermatologic disorder, has emerged as a systemic disease with a broad spectrum of clinical features. Second, systemic lupus erythematosus (SLE) has come to be recognized as an autoimmune, immune-complex process and, on clinical and immunologic grounds, multiple subsets and discreet variants have been identified which differ in process, clinical expression, therapeutic need, and prognosis. Multiple environmental, genetic, and hormonal factors have been described which contribute to the clinical expression or seroreactivity of SLE and its variants. Finally, with the capacity for earlier diagnosis, the therapeutic means for suppressing the disease process, and the consequent prolonged survival, the incidence and prevalence of SLE have progressively increased. For the years 1956-65, the prevalence and incidence of SLE per 100,000 were 14.6 and 2.0,<sup>1</sup> respectively, compared with 50.8 and 7.4 in the interval 1967-73.<sup>2</sup> In our Johns Hopkins experience, a four-year survival of 51 percent reported in 1954<sup>3</sup> was, in 1981, 97 percent at five years and 90 percent at ten years.<sup>4</sup>

In this setting, criteria for the classification of SLE were initially proposed by the American Rheumatism Association in 1971,<sup>5</sup> with revisions in 1982.<sup>6</sup> These criteria are listed in Table 1; the listings have been re-ordered to emphasize both the common denominators and the differences between the two criteria sets. Under both criteria sets, the occurrence of four or more features satisfies the diagnosis of SLE. Independent studies have shown both their specificity and sensitivity to exceed 90 percent, but it must be emphasized that these criteria were developed for the classification of SLE in reports of clinical series and not for the bedside diagnosis of individual patients at any one point in time. Multiple added features of SLE with less sensitivity or specificity<sup>7</sup> contribute to the diagnosis and may be major determinants in the course of the disease.

The initial manifestations and those occurring with time in 140 consecutive patients admitted to The Johns Hopkins Rheumatic

---

*Systemic lupus erythematosus is a complex immunologic disorder with an equally complex clinical presentation and course. In recent years, the earlier recognition of milder disease supported by immunologic markers coupled with means of intervention and suppression, as well as medical/surgical advances has resulted in increases in quality of life and survival.*

---

Disease Unit at Good Samaritan Hospital during a fifty-four-month interval are shown in Table 2. Patients with drug-induced syndromes, discoid lupus alone, rheumatoid arthritis regardless of seropositivity, and undifferentiated connective tissue disease are specifically excluded. The variability in presentation and course of disease is obviated. In fact, the true onset of disease may be difficult, if not impossible, to define with low-grade constitutional symptoms at one point on the spectrum, a routinely discovered laboratory abnormality (e.g., biologic positive serologic test for syphilis) at another, and a fulminant, febrile, multisystem disorder at still another point on the spectrum. For this very reason, the time of diagnosis rather than the date of probable first symptom is focused on in most serial and survival studies.

Table 1. Criteria for SLE Classification

1971	1982
1. Facial erythema	1. Malar rash
2. Discoid lupus	2. Discoid lupus
3. Photosensitivity	3. Photosensitivity
4. Oral or nasopharyngeal ulceration	4. Oral ulcers
5. Arthritis without deformity	5. Nonerosive arthritis
6. Pleuritis and/or pericarditis	6. Pleuritis and/or pericarditis
7. Psychosis and/or convulsions	7. Seizures and/or psychosis
8. Alopecia	
9. Raynaud's phenomenon	
10. Profuse proteinuria (>3.5 mgs/day)	8. Persistent proteinuria and/or cellular casts
11. Cellular casts	
12. Hemolytic anemia and/or leukopenia (<4,000/mm <sup>3</sup> ) and/or thrombocytopenia (<100,000/mm <sup>3</sup> )	9. Hemolytic anemia or leukopenia (<4,000/mm <sup>3</sup> ) or lymphopenia (1,500/mm <sup>3</sup> ) or thrombocytopenia (<100,000/mm <sup>3</sup> )
13. LE cells	10. LE cells or anti-nDNA or anti-Sm antibody or chronic false positive STS
14. Chronic false positive STS	11. Positive ANA

STS = Serologic test for syphilis    ANA = Antinuclear antibody

Table 2. Clinical Features of SLE<sup>8</sup>

Initial		Cumulative
74 (52%)	Arthritis/arthralgia	123 (88%)
37 (26%)	Cutaneous	110 (79%)
25 (17%)	Fever	98 (70%)
16 (11%)	Pleurisy/pericarditis	89 (64%)
2 (1%)	Anemia	81 (58%)
3 (2%)	Nephritis	67 (48%)
6 (4%)	Alopecia	57 (41%)
5 (3%)	Neuropsychiatric	52 (37%)
N.S.	Vasculitis	39 (28%)
2 (1%)	Raynaud's phenomenon	32 (23%)
3 (2%)	Thrombocytopenia	32 (23%)
1 (<1%)	Adenopathy	26 (19%)
N.S.	Splenomegaly	24 (17%)
3 (2%)	Chronic BFP-STS	20 (14%)
N.S.	Myositis	15 (11%)
N.S.	Myocarditis	12 (9%)
140		

Data modified in tabulation.

N.S. = not stated

BFP - STS = Biologic false positive - serologic test for syphilis

Similarly, the course of disease is highly variable from one patient to another. It is imperative that flares of SLE be distinguished from intercurrent illnesses; this can only be accomplished by thorough, thoughtful clinico-laboratory reevaluations. Even in those with strictly patterned recurrences of active disease (e.g., fever, rash, arthritis, serositis), there is no substitute for repeated assessments since complicating illnesses requiring specific treatment may upset the balance between drug-therapy and SLE control.

Presented here, in brief, are the clinical manifestations of SLE, some of which are dealt with in greater depth in other sections of this journal. It should become clear that SLE is an extremely polymorphic disorder and, in time, may prove to be an umbrella covering a cluster of differing entities.

Constitutional Manifestations

*Fatigue* and easy *fatiguability* may be prominent at times of disease activity either before a diagnosis of SLE can be made or with subsequent flares of the disease. Similarly, unexplained *anorexia* and *weight loss* may occur in a few patients. Most problematic is the *fever* which is present at some time during the course of disease in the majority.<sup>3,5</sup> The pattern of fever varies broadly with a low-grade, sustained, or intermittent temperature elevation at one extreme and a hectic, spiking fever at the other. In almost half, a temperature  $\geq 102^\circ$  has been reported in multiple series.

The issue of fever is a major one in patients with SLE in view of its potential implications and it can be ascribed to SLE activity only after the meticulous exclusion of other causes, especially infection. Chills rarely, if ever, accompany the fever of SLE and, in our experience, they are usually related to complicating infection or antipyretic drug therapy. In one recent series<sup>9</sup> of seventy-four febrile episodes, forty-nine (66 percent) were associated with SLE activity and twenty-five (34 percent) with intercurrent infection. In our SLE population, adverse drug reactions and postoperative fever are frequent occurrences. Thus, in view of the enormous therapeutic implications, the specific cause of fever must be determined with each episode.

Musculoskeletal Manifestations

*Polyarthralgias* or frank *polyarthritis* constitute the most common clinical features of SLE and, in over half of patients, are among the presenting manifestations of the disease. The interphalangeal and metacarpophalangeal joints, wrists, and knees are particularly targeted. The articular inflammation may be fleeting, evanescent, and recurrent or, less frequently, rheumatoid-like clinically with a sustained, symmetrical process.

In a recent series,<sup>10</sup> forty-one (5 percent) of 858 patients with SLE developed clinical deformities of the hands which appeared early in the course of disease and, al-



though clinically rheumatoid-like, were distinct from rheumatoid arthritis. The ulnar deviation and swan neck deformities appeared to be periarticular and ligamentous in origin without erosive changes radiologically. While the differentiation of articular SLE from rheumatoid arthritis can be difficult, especially in the setting of subcutaneous nodules clinically and histologically identical to those seen in rheumatoid arthritis,<sup>11</sup> the synovial fluid of SLE is characteristically less inflammatory and consistently shows a reduced complement level. However, major joint effusions are infrequent in SLE.

*Periarticular* abnormalities occur but tenosynovitis with tendon ruptures is uncommon.<sup>12</sup> Baker's cysts are most often associated with synovitis of the knee and, with rupture or dissection, may result in the pseudothrombophlebitis syndrome<sup>13</sup> which must, of course, be differentiated from the more common true thrombophlebitis.

The most common orthopaedic problem of our SLE patients is *ischemic necrosis of bone* (avascular or aseptic necrosis, osteonecrosis). This lesion, usually polyfocal and affecting predominantly femoral and humeral heads, has been reported in SLE alone but most frequently is associated with corticosteroid-treated SLE. The onset of isolated joint pain in such patients, especially those with a vasculopathy (e.g., Raynaud's disease, vasculitis) should arouse suspicion of this process.<sup>14</sup>

A *polymyositis* occurs in 10 to 15 percent of patients with SLE and is indistinguishable from the inflammatory myopathy alone or in other disease settings. Weakness and muscle tenderness are the cardinal symptoms; elevation of the battery of muscle enzymes (e.g., creatinine phosphokinase (CPK), transaminases, aldolase), characteristic electromyographic findings, and an intense inflammatory infiltrate on muscle biopsy are the rule. Myalgia—only with companion flu-like illness is more common. Thus, every element of the musculoskeletal system can be involved.

### Mucocutaneous Evidence

A myriad of skin lesions and oral membrane ulcerations occur and constitute four of the accepted revised criteria for SLE (Table 1). A listing, far from encyclopedic, is shown in Table 3. The possible mechanisms

of cutaneous injury in the spectrum of lupus erythematosus have recently been well-reviewed.<sup>15</sup> The classical malar rash, present in 30 to 50 percent of patients, may be photosensitive (or not), and such is the case with the more generalized erythematous macular/papular eruptions which are preferentially sited in exposed areas (e.g., extensor surfaces of limbs, V-neck area, face).

While not specific, the demonstration by immunohistology of immune deposits at the dermal-epidermal functional membrane (i.e., band test) of clinically normal skin as well as lesions is supportive of the diagnosis of SLE. A curious linear telangiectasia underlying the lash line of the upper eyelids is almost pathognomonic. Vasculitic lesions are varied in their clinical morphology and reflect active immune-complex disease.<sup>16</sup> Livedo reticularis, blotchy palmar and digital pad erythema, periungual erythema and, less frequently, splinter hemorrhages, and ulcerative lesions of the skin and membranes are commonplace. Subcutaneous nodules, clinically and histologically identical to the rheumatoid nodule, are infrequently seen.<sup>17</sup> It is of interest that erythema nodosum, an immunogenic arteriolitic lesion, is exceedingly rare in active SLE; in a study of our patients with SLE, either a bacterial infection or drug could be identified in all instances.

The circumscribed lesions of discoid lupus occur in approximately 20 percent of those with SLE and may antedate systemic disease by months, even years. The majority of patients with discoid lupus, however, never develop significant systemic manifestations of SLE. Diffuse or patchy alopecia and fractured hairs along the frontal/temporal hairline are frequent associates of active disease. A unique, annular, erythematous skin rash highly associated with photosensitivity has earmarked a subset with subacute cutaneous lupus erythematosus (SCLE) which is characterized further by a low order of systemic disease and a high prevalence of anti-Ro(SSA) positivity. Thus, not only are cutaneous lesions numerous and varied in SLE but some are also pivotal in the distinction of variants with limited major organ involvement.

### Pleuropulmonary Symptoms

*Pleuritis*, with or without effusion, is the most common pulmonary feature, occurring in approximately half of the patients with SLE and as a presenting feature in 10 to 15 percent. The dominant manifestation is typical pleuritic pain with a pleural friction rub present in no more than a quarter of patients. Pleural reaction radiographically is occasionally found in the absence of symptoms but is not consistently present in those with pleuritic pain.

When an effusion is present, the fluid is characteristically exudative with a modest leukocytosis, increased protein, immune complexes, and a decreased complement level. Unlike the rheumatoid effusion with its low glucose and acidic pH, the pleural effusion

**Table 3. Mucocutaneous SLE**

Cutaneous	Membranous
Diffuse erythema	Oral, nasopharyngeal
Macular	Ulcerations
Maculopapular	
Malar rash	
Vasculitis	
Ulcerations	
Subcutaneous nodules	
Livedo reticularis	
Periungual erythema, infarcts	
Splinter hemorrhages	
Discoid lesions	
Alopecia	



of SLE has a normal glucose and a pH greater than 7.35.<sup>18</sup> In fact, a low glucose coupled with a normal or elevated complement should alert one to the likelihood of complicating infection.

Sterile *pneumonitis*, a relatively infrequent feature of SLE, is undoubtedly multifactorial in etiology with pulmonary vasculitis rarely found, deposits of complement and immunoglobulin in vessels and alveolar walls found in some patients, and innocent histopathology found in still others. Matthay et al<sup>19</sup> reported *acute lupus pneumonitis* in twelve of 102 patients hospitalized with SLE characterized by severe dyspnea, tachypnea, hypoxemia, and diffuse pulmonary infiltrates on x-ray. All were febrile. Six patients died despite intensive therapy. In four, only nonspecific histologic changes were found. Of the six survivors, all had a residual restrictive ventilatory defect with a low diffusion capacity, and half had residual interstitial infiltrates radiographically. Massive *pulmonary hemorrhage* with fatal outcome has been reported,<sup>20,21</sup> especially in those with lupus glomerulonephritis.

Eisenberg et al<sup>22,23</sup> recognized chronic, diffuse, *interstitial pulmonary infiltrates* as a manifestation of SLE, with progressive dyspnea clinically, and marked restriction of the diffusion capacity on functional testing. On biopsy, nonspecific fibrosis and chronic inflammation are found with immunoglobulin and complement deposits in the interstitium, supporting an immune-complex mediation of this intrapulmonary process.

Finally, there are those with dyspnea associated with the *shrinking lung syndrome* characterized by elevated, dysfunctional diaphragms and diminished lung volumes<sup>24</sup> which may be reversible on therapy.

### Cardiovascular Complications

As shown in Table 4, all elements of the cardiovascular system can be involved in SLE. Despite the changing spectrum of SLE with immunologic recognition of earlier, milder disease and the altered course of disease by therapeutic interventions as well, cardiovascular involvement continues to contribute significantly to the morbidity and mortality of the disease. However, it must be emphasized at the outset that, as with other clinical problems in patients with SLE, cardiovascular complications can be attributed to the disease only after exclusion of alternative explanations.

### Lupus Carditis

Histopathologic evidence of cardiac involvement in SLE exceeds in prevalence its clinical expression. Bulkley and Roberts<sup>25</sup> have emphasized that diffuse multistage lesions, ranging from acute inflammatory foci to their healed, fibrous residua, are found in pericardium, myocardium, and valves, and recent evidence supports their immune-complex induction.<sup>26</sup> The presence of these lesions correlates poorly with antecedent clinical evidence of inflammatory heart disease.

Clinically, pericarditis is the most common cardiac manifestation of SLE, ranging from 19 to 48 percent in several large series, but is a presenting feature of the disease in only  $\leq 2$  percent. In a recent prospective study of 100 SLE patients, Badui et al<sup>27</sup> reported pericarditis in 39 percent. Typically, anterior substernal chest pain, varying with position and, in 8 to 29 percent, an intermittent friction rub, are the dominant clinical features. The true extent of pericardial involvement clearly exceeds that which is clinically apparent in view of the definition of pericarditis by echocardiography in asymptomatic individuals on the one hand, and increased pericardial pathology (up to 50 percent) at necropsy on the other.

Despite the frequent demonstration of pericardial fluid by echocardiography, clinically detectable effusions are uncommon, and cardiac tamponade, rare. Like the pleural and synovial fluid of SLE, pericardial fluid is a low-grade inflammatory exudate. It has been suggested<sup>28</sup> that an acid pH ( $< 7.00$ ) is characteristic and differentiates effusions of SLE from those related to uremia or trauma. The protein is usually elevated and the glucose, unlike rheumatoid arthritis, usually normal. The presence of antinuclear antibodies in seropositive patients and complement-fixing immune complexes, as well as reduced levels of complement components, is the rule. Estes and Christian<sup>29</sup> demonstrated pleural effusions in twenty-two (76 percent) of their twenty-nine patients with pericardial involvement. This close association minimizes the need for diagnostic pericardiocentesis and reserves this procedure primarily for therapeutic removal of fluid when cardiac function is impaired. However, when a pericardial fluid alone occurs as presumptive evidence for SLE activity, its examination may be necessary to be certain that no intercurrent process, especially tuberculosis or other infection, is present.

Constrictive pericarditis rarely develops in SLE but has been reported;<sup>30,31</sup> the demonstration of immunoglobulins in the pericardium further supports its immunogenesis.

The clinical diagnosis of *myocarditis* in SLE has ranged from 8 to 25 percent in major series over the years, with myocardial pathology at necropsy in these and others ranging from 14 to 50 percent. The clinical diagnosis has been problematic, varying on the basis of (1) an unexplained resting tachycardia, (2) electrocar-

**Table 4. Cardiovascular Manifestations of SLE**

Lupus carditis	Antiphospholipid antibody
Pericarditis	syndrome
Myocarditis	Coronary artery disease
Endocarditis	
Conduction defects	
Vascular lesions	
Raynaud's phenomenon	
Vasculitis/arteritis	
Hypertension	
Venous disease	



diagram (EKG) changes, and (3) one or more of the following: cardiomegaly in the absence of pericardial effusion, a gallop rhythm, ventricular arrhythmias, otherwise unexplained congestive heart failure and, in recent years, elevated serum cardiac (MB) isoenzyme of creatine kinase. Recently, Badui et al<sup>27</sup> determined a prevalence of 14 percent.

Borenstein et al<sup>32</sup> emphasized the association of myocarditis with skeletal myositis. These patients with such striated muscle inflammation were characterized immunologically by the presence in serum of anti-nRNP antibody. The correlation of anti-nRNP, although controversial in SLE, has been emphasized in mixed connective tissue disease (MCTD); MCTD can no longer be considered a discreet clinical entity,<sup>33</sup> evolving in large measure over time into SLE or systemic sclerosis. In the pediatric series by Singsen et al,<sup>34</sup> four (29 percent) of their fourteen patients, ranging in age from twelve to twenty years, developed clinical myocarditis. An additional three patients (21 percent) with clinically silent heart disease were found to have myocardial necrosis, and interstitial inflammation and fibrosis at autopsy. Thus, clinical criteria for myocardial involvement in SLE are insensitive. Nonetheless, congestive heart failure not otherwise explained is uncommon.

The classical cardiac lesion of SLE, described by Libman and Sacks in 1924,<sup>35</sup> is the verrucous *endocarditis* which, prior to echocardiography, was a pathologic rather than clinical diagnosis. While systolic murmurs occur in 16 to 44 percent of patients with SLE and diastolic murmurs in less than 5 percent, neither correlates well with the presence of Libman-Sacks endocardial verrucae found at necropsy. Although any valve can be involved, the mitral is dominant and the aortic valve comparatively infrequent. Bulkley and Roberts<sup>25</sup> emphasized the close association of such valvular lesions with concomitant pericarditis present in sixteen (90 percent) of their eighteen autopsied patients with endocarditis. Overall, the major manifestations of these verrucae have not been valvular dysfunction but, rather, embolic phenomenon or, infrequently, secondary infection.

Hemodynamically significant valvular lesions, especially mitral and aortic insufficiency, do occur in SLE but are morphologically distinct from the Libman-Sacks lesions. Galve et al<sup>36</sup> reported a prospective echocardiographic study of seventy-four patients with SLE and found both Libman-Sacks verrucae (seven patients) and thickened rigid valves (six patients). It was in the latter group that valve surgery was required (five or 83 percent) during a five-year follow-up period, in contrast to only one (14 percent) of the seven with Libman-Sacks lesions. Valvular stenosis, although well-recognized, is far less frequent than the valve incompetence.

*Conduction defects* in adult SLE, ranging from 34 to 70 percent, are most often expressed as nonspecific ST-T changes on EKG. Although first-degree heart block is well-recognized, high-grade heart block is un-

usual in the absence of frank myocarditis or a coronary occlusion. Auricular fibrillation without explanation other than SLE has been reported, but significant arrhythmias are unusual. In all patients studied by Bulkley and Roberts,<sup>25</sup> the nodes and atrioventricular bundles were normal, but the proximal bundle branch segments were abnormal in 50 percent with fibrous scarring more marked than acute inflammation. These changes correlated closely with the conduction defects noted antemortem -- namely bundle branch block and a single instance of complete atrioventricular dissociation. These data are in contrast to earlier ones which demonstrated arteritis, inflammatory cell aggregates, and patchy fibrosis with scarring of the sinus and atrioventricular nodes. The differences between these data sets are presumptively related in large part to the corticosteroid intervention more recently used.

The primary interest relative to conduction abnormalities has focused not in the adult but in the neonate with lupus and congenital heart block.

### Vascular Lesions

The cardiovascular lesions of SLE have recently been well-reviewed.<sup>37</sup> In addition to a pancarditis, multiple peripheral vascular lesions occur. *Raynaud's phenomenon* occurs in approximately one-quarter of our patients and is usually an early and nonprogressive problem. Unlike systemic sclerosis, the Raynaud's of SLE only infrequently progresses to fixed peripheral vascular insufficiency with digital gangrene. In fact, unpublished observations in our SLE patients would indicate that this vasospastic phenomenon pretreatment may abate after the institution of corticosteroid therapy to the extent that almost half of the patients, years later, do not recall it as a feature of their disease.

In reviewing the literature, Raynaud's is reported in 10 to 58 percent of patients, presenting initially in 1 to 5 percent. While it may long antedate the diagnosis of SLE as retrospectively reviewed, SLE is an uncommon outcome in those patients, especially young women, prospectively followed for Raynaud's alone. In SLE, Raynaud's does not appear to earmark any discreet demographic, clinical, or immunologic subset, although it may be a risk factor for ischemic bone necrosis<sup>38</sup> and pulmonary hypertension.<sup>39</sup>

*Systemic vasculitis* contributes in a major way to the morbidity of SLE. While the consequences of small vessel inflammation are presented elsewhere in this journal, it should be emphasized here that a broad array of ischemic lesions occur in SLE on this basis, including cutaneous and membrane ulceration, myocardial infarction, bowel perforation, and central and peripheral neuropathies. While small vessel involvement is the hallmark of SLE, infrequent *arteritis* of the medium and large muscular arteries has also been reported including pulseless syndromes.

The prevalence of *systemic hypertension* is somewhat



controversial. A review of the literature suggests that hypertension was less frequent in the series of the 1950s (7 to 14 percent) than in the 1970s and after (25 to 49 percent), which is in contrast to the report of Hashimoto and Shiokawa<sup>40</sup> who found, regardless of trends over time, that hypertension was related to lupus nephritis in the majority. In the selective autopsy series of Bulkley and Roberts,<sup>25</sup> twenty-five (69 percent) of their thirty-six patients had been hypertensive, with clinically evident lupus nephritis in twenty-one (84 percent) of the twenty-five. In the group with hypertension, higher dosages of corticosteroids had been chronically administered.

*Pulmonary hypertension* is uncommon in SLE and its pathogenesis is uncertain. An association with Raynaud's phenomenon has been observed and Raynaud's is far more frequent in those with pulmonary hypertension than in the general SLE population. Perez and Kramer<sup>39</sup> reported Raynaud's in three of their four patients; in one, there was a marked increase in the severity of Raynaud's just before pulmonary hypertension emerged. In addition, arteritis, arteriolitis, and immune-complex deposition in the lung have been documented but not consistently associated with hypertension in the pulmonary circuit. In SLE, the occurrence of pulmonary hypertension is a serious, poor prognostic sign.

*Thrombophlebitis* occurs in 2 to 12 percent of adults with SLE. Caciuro et al<sup>41</sup> found it to be an initial manifestation in 9 percent of forty-two children. Recurrent thrombophlebitis may also occur early in adults, at or even before the time of diagnosis but, in our population, is very infrequent in those already on therapy for SLE. In fact, true thrombophlebitis has not been observed more frequently than the pseudothrombophlebitis syndrome<sup>13</sup> from which it must be distinguished. However, recurrent venous thromboses can occur in the subset with the antiphospholipid antibody syndrome.<sup>42</sup> Thrombosis of the renal veins and inferior vena cava is a reported complication of lupus nephritis.<sup>43</sup>

The *antiphospholipid antibody syndrome*,<sup>44</sup> in addition to its associated risks in pregnancy, has broad cardiovascular implications. In addition to arterial and venous thromboses, the presence of antiphospholipid antibodies has recently been associated with Libman-Sacks verrucal endocarditis or valvular insufficiency.<sup>45,46</sup> This is not only of major clinical significance but also reopens the issue of pathogenesis of the valvular lesions.

*Coronary artery disease* in SLE exceeds the expected prevalence for a demographically matched non-SLE population and can reflect multiple lesions including arteritis, circulating antiphospholipid antibodies, or accelerated arteriosclerosis. Urowitz et al<sup>47</sup> analyzed deaths from SLE and reported a bimodal distribution, with those deaths early in the course of disease associated with active SLE and those two-and-one-half years or more after diagnosis due to myocardial infarction. Spiera and Rothberg<sup>48</sup> reported four young adults

with acute myocardial infarctions who had had chronic corticosteroid therapy since the childhood onset of SLE, hypertension, and arteriosclerotic coronary arteries defined at autopsy in two and angiographically in another. Others have also described, by angiography, occlusions of the coronary arteries and, rarely, coronary arteritis with aneurysms.

The basis of ischemic heart disease is variable. Premature atherosclerotic plaques with narrowing of the major coronary arteries<sup>25</sup> have been associated with prolonged administration of corticosteroids; the suggestion of less coronary involvement in the pre-steroid era would tend to support this concept. However, Haider and Roberts<sup>49</sup> did not find a comparative excess of corticosteroids in their young SLE patients with severe coronary atherosclerosis but rather found hypercholesterolemia, systemic hypertension, and a higher prevalence of mitral valvular and pericardial lesions. These observations suggest that the more extensive, severe lupus carditis may imply an immunogenesis of lesions in the coronary system. Nonetheless, arteritis of the coronary arteries is a rare cause of ischemic heart disease with others being embolization and altered intravascular coagulability. Thus, there would appear to be multiple, variable coronary lesions and risk factors among patients with SLE which must be considered for optimal treatment. Vigorous management of risk factors (especially systemic hypertension, hypercholesterolemia, and tobacco abuse) is emphasized.<sup>50</sup>

### Renal Manifestations

Lupus nephritis has been a major focus of interest for clinicians and investigators alike in view of its dominant influence on the morbidity and mortality of SLE. In a multicenter study of SLE outcome,<sup>51</sup> there were twenty-two deaths among the 1,103 patients entered and followed from 1965 to 1978. In 193 (87 percent), a specific cause of death was identified. Death was attributed to SLE organ involvement in sixty-eight (35 percent) and to infection in seventy-four (38 percent). Of those with SLE as the primary cause of death, lupus nephritis exceeded all others, singly and collectively, and accounted for forty-one deaths. Thus, the presence or absence of renal involvement becomes a critical factor in designing therapy and projecting prognosis.

An enormous body of literature has been accumulated to establish immune-complex glomerular injury, especially nDNA-anti-nDNA.<sup>52,53</sup> In our patients, clinically evident glomerulonephritis has been present in 48 percent of 140 patients reported in 1976 and 31 percent of an additional 150 patients reported in 1985.<sup>54</sup> This decline in clinically problematic renal disease in the Johns Hopkins' experience since the 65 percent prevalence reported by Harvey et al<sup>3</sup> has been the major change in disease expression over the years and may reflect earlier treatment of milder disease with corticosteroids which, as in the experimental immune



nephritis in the animal model, may modulate, even tamponade, renal injury.<sup>55</sup>

Pathologically, a World Health Organization classification has evolved and is widely accepted, although still controversial in terms of clinical long-term implications (Table 5). Class I and Class II are normal by light microscopy. While Class I is also normal by electron microscopy and immunofluorescence, mesangial abnormalities are seen by these techniques in Class II. The tissue changes are the same in Classes III and IV but differ in degree with less than 50 percent of glomeruli involved in Class III and more than 50 percent in Class IV. In these groups, progressive proteinuria and renal dysfunction are found along with an active urinary sediment. In Class V, necrotizing and proliferative glomerular lesions are lacking, and the glomerular basement membrane is diffusely thickened. Marked proteinuria occurs in the vast majority and, clinically, with the nephrotic syndrome. Those with diffuse proliferative lupus nephritis (Class IV) have been thought to have the most serious prognosis and limited survival,<sup>56</sup> but the added recognition of progression of Classes II and III to Class IV over time compounds the difficulty in projecting the course and outcome on a single biopsy. Furthermore, Cameron et al<sup>57</sup> found no difference in the long-term outcome of the different histologic groups in their seventy-one patients with SLE and clinical evidence of nephritis, in contrast to the observations of Appel et al.<sup>58</sup>

The other problematic dimension of lupus nephritis is the confirmed observation that histologic glomerulonephritis can occur in the absence of any abnormalities on urinalysis. Nonetheless, the clinical hallmark of early, active lupus nephritis is a kaleidoscoped urinary sediment with varying degrees of proteinuria. Renal insufficiency, with decreased clearance of creatinine and its elevation in serum, is generally late to appear. It has been emphasized that rigorous monitoring of urinary sediment and renal function is essential to identifying renal involvement at a stage responsive to therapeutic intervention, with renal biopsy also of help in establishing indications for therapy.<sup>59</sup> Edworthy et al<sup>60</sup> developed a scheme of stratification of value in projecting outcome which was based on renal function. In a series of patients with biopsied lupus nephritis, Esdaile et al<sup>61</sup> emphasized the duration of renal disease pre-biopsy, overall severity of SLE, presence of vasculitis, and hypertension of prognostic significance, as well as renal status. Both studies<sup>60,61</sup> found a decreased level of C3 of value as a marker of activity and progression.

**Table 5. Classification of Lupus Nephritis: World Health Organization**

- I. Normal
- II. Mesangial change
- III. Focal proliferative glomerulonephritis
- IV. Diffuse proliferative glomerulonephritis
- V. Membranous glomerulonephritis

While circulating anti-nDNA antibody has been repeatedly shown to be associated with lupus nephritis, it is an insensitive marker for both diagnosis of a renal lesion and monitoring of disease activity at the renal level.

**Neuropsychiatric Indications**

Nervous system involvement by SLE represents a major problematic issue. At the outset, it must be emphasized that the neuropsychiatric illness due to SLE and its vasculitis must be differentiated from that of other causes in patients with SLE (e.g., hypertension, renal failure, drugs, complicating infection).

Involvement of the central or peripheral nervous system occurs in 25 percent to more than 50 percent of patients with SLE. In our experience, neuropsychiatric SLE was a feature in 37 percent of patients studied during 1970 to 1975<sup>8</sup> and in 55 percent of those studied from 1980 to 1984.<sup>54</sup> It seems unlikely that this escalating trend reflects increasing survival in view of the emergence of nervous system involvement early in the course of disease in the majority. In both our series and those of others, the clinical expression of central nervous system (CNS) and peripheral nervous system (PNS) involvement by SLE is remarkable for its variability and multilevel involvement. The spectrum of neuropsychiatric manifestations has recently been well-reviewed.<sup>62,63</sup>

Of our 140 hospitalized SLE patients reported earlier,<sup>8</sup> neuropsychiatric illness of SLE (NP-SLE) with the specific features cited in Table 6 was found in fifty-two (37 percent). The only statistically significant correlates with NP-SLE were vasculitis apart from the nervous system and thrombocytopenia. In addition, there were nineteen (14 percent) with psychiatric or neurologic events for which an alternative cause could be identified. In a later series of 150 outpatients and inpatients,<sup>54</sup> eighty-three (55 percent) had NP-SLE; CNS involvement was more frequent (fifty-nine patients, 39 percent) than PNS (thirty-two patients, 21 percent), organic psychosis (twenty-four patients, 16 percent), and seizures (twenty patients, 13 percent). Thus, NP-SLE represents a prominent cluster of clinical problems.

**Table 6. Neuropsychiatric (NP) SLE<sup>8</sup>**

	NP-SLE	SLE
Total No. Patients	52 (37%)	140
Psychiatric	24 (46%)	17%
Seizures	17 (33%)	12%
Long tract signs	16 (31%)	11%
Cranial nerve	16 (31%)	11%
Peripheral neuropathy	15 (29%)	11%
Cerebellar	5 (10%)	3%
Scotomata	4 (8%)	3%
Pseudotumor	2 (4%)	1%
Chorea	2 (4%)	1%
Meningitis, myelitis	1 (2%)	<1%

Data emphasize prevalence of individual neuropsychiatric features among those with central nervous system/peripheral nervous system involvement and in SLE overall.



*Organic brain syndromes* may be subtle in their presentation with impaired intellect and judgment or memory lapses which may be transient and intermittent but, if unrecognized and untreated, can be progressive. In one study, Carbotte et al<sup>64</sup> found impaired cognitive function in the majority (66 percent) of sixty-two SLE patients compared to 14 percent of normal controls. *Psychiatric events*, even frank psychosis, occur frequently among those with diffuse cerebral involvement and, often in the setting of SLE activity apart from the nervous system on the one hand, and with other CNS/PNS lesions on the other. Lim et al<sup>65</sup> found correlations between neurologic lesions and psychosis in SLE. Affective disorders and anxiety were related to environmental factors and stresses rather than SLE activity.

*Seizures* of any type occur in up to one-third of SLE patients with grand mal seizures most common. Petit mal and temporal lobe seizures and, least frequently, Jacksonian marches, have been reported. These events can occur at any time but, in our patients, have been observed more often within the first year after SLE diagnosis or even before SLE is clearly established. A chronic seizure disorder rarely occurs.

A multiplicity of *focal neurologic lesions* occurs,<sup>8,63,66</sup> including cerebrovascular accidents, cranial and peripheral neuropathies and, less frequently, cerebellar infarcts, transverse myelitis, chorea, and other movement disorders. The dominant underlying process is an immune-complex-mediated vasculitis although active vasculitis, at autopsy, is infrequent.<sup>67</sup> This can be explained in large part by response to therapy and the temporal distance between the clinical event and postmortem examination. An alternative pathway to intracranial infarctions is the altered coagulability and thromboembolic complications of the antiphospholipid antibody syndrome.<sup>68,69</sup>

Additional immunologic mechanisms in NP-SLE have been supported by the association of anti-neuronal antibodies in the cerebrospinal fluid of the subset with diffuse cerebritis<sup>70</sup> and cognitive defects,<sup>71</sup> and the close association of antiribosomal P protein antibodies with psychosis.<sup>72</sup>

It is likely that these recently recognized immune systems will increase our diagnostic capacity for establishing NP-SLE, for the diagnosis can be difficult and problematic in view of the insensitivity of cerebrospinal fluid abnormalities on routine testing and lack of specificity of electroencephalogram (EEG) changes. Evoked potentials (visual, auditory, somato-sensory) have been useful in confirming anatomic pathways and may prove to be a sensitive measure of cerebral dysfunction,<sup>73</sup> but data are still limited. Imaging by x-ray computed tomography (CT) and the more sensitive magnetic resonance (MRI) are, at present, the optimal means for identifying focal lesions with advantage for CT scanning in identifying acute hemorrhagic lesions. When one recalls the microscopic lesions<sup>67</sup> characteristic of CNS-SLE, namely arteriolar microinfarcts

and hemorrhage, it is not surprising that cerebral angiography is of low yield.

Finally, Kremer et al,<sup>74</sup> coupling psychiatric interviews with a battery of standardized psychological tests, have emphasized a high prevalence of mild nonorganic, nonpsychotic psychopathology in patients with SLE which does not correlate with underlying CNS-SLE, severity or activity of SLE, or corticosteroid therapy. Somatic and neurotic concerns, anxiety, tension, and a depressive mood were prominent.

### Reticuloendothelial/Hematologic Manifestations

Overall, considering the larger reported series, *lymphadenopathy* occurs in 23 to 59 percent of patients with SLE but is particularly prominent in the young.<sup>75,76</sup> In our earlier series of eighty-two patients, lymphadenopathy was present in 78 percent of those aged ten to twenty-nine years, 38 percent in the thirty to forty-nine year age group, and only 22 percent of those fifty years of age or older. Occasionally, adenopathy can be so prominent that a lymphoma is suggested clinically.

*Splenomegaly* occurs less frequently (< 20 percent), and only rarely is splenectomy indicated for refractory cytopenias, especially thrombocytopenia.<sup>77,78</sup> In the majority, hematologic response is prompt and sustained postoperatively with platelets returning to  $\geq 150,000$ , an increase in hematocrit  $\geq 20$  percent in those with hemolytic anemia, and return of white blood count to normal in the few with companion leukopenia preoperatively.

*Hematologic abnormalities*, collectively, are common with an anemia in 38 to 98 percent which is multifactorial and hemolytic in less than 20 percent. Leukopenia, usually mild in degree, occurs in 35 to 80 percent. Least common is a marked thrombocytopenia in 7 to 21 percent. While severe SLE-related leukopenia (< 3000 cells/cmm) compromising host defense against infection has been observed, it is infrequent. When leukopenia of this degree occurs, one must search intensively for an alternative cause (especially drug). The hematologic abnormalities generally respond to medical therapy.

The spectrum of autoantibodies is presented elsewhere, but the circulating lupus anticoagulant merits mention here as well. A misnomer, this autoantibody is neither confined to SLE nor promotes hemorrhage. Its prevalence ranges broadly in SLE (for reasons of technique and case selection) from 5 to greater than 50 percent. There is an increased frequency of thrombocytopenia<sup>79-81</sup> in the anticoagulant (or antiphospholipid) subset. In the few who do have bleeding, it is in those who also have low platelets or, less frequently, a prothrombin deficiency. The association with intraarterial and intravenous thrombosis has been well established by numerous investigators, as well as pregnancy failure. Furthermore, it has recently been suggested that it may enter into the pathogenesis of the Libman-Sacks endocardial, valvular lesion.



## Additional Clinical Dimensions

Multiple *ocular* lesions are found in SLE patients with white patches or cytooid bodies (a histologic term) in up to 15 percent of patients usually with otherwise evident active disease. Fortunately, severe disease with visual impairment or loss is rare but can occur as a result of optic neuropathy or retinal vaso-occlusive disease.<sup>82,83</sup> Such lesions are associated not only with active SLE but also with involvement of the CNS. In addition, secondary Sjogren's syndrome with xerophthalmia (even keratoconjunctivitis sicca) and xerostomia can complicate SLE, and there is current interest in the clinical and immunologic common denominators between Sjogren's and SLE.

*Otic* abnormalities are infrequent but serious middle ear effusions, not otherwise explained, have been reported. Hearing deficits are rare, and autoimmune hearing loss is associated with ANA-positivity rather than clinical SLE. Acute *laryngeal* inflammation and edema can occur,<sup>84,85</sup> and isolated cricoarytenoid arthritis has been found in a few instances. Steroid-responsive throat pain has been present in several of our patients (less than 1 percent) and unless associated with clinically apparent inflammation or vasculitis has been reported rarely by others.

*Lower urinary tract* abnormalities have long been recognized and, in one autopsy series,<sup>86</sup> were present in sixteen (46 percent) patients.<sup>86</sup> Interstitial cystitis was most common with vasculitis and perivascular inflammatory lesions present. The process has been shown to be an immune-complex vasculitis and, in SLE, is associated with high titer ANA-positivity in the majority.

Finally, the role of the *endocrine system* and presence of endocrinopathies in SLE are still incompletely answered. The dominance of young women, the milder disease in late-onset SLE in postmenopausal women, the intensification of the disease by estrogens in the experimental model of SLE (NZB/NZW F1 hybrid mouse), as well as its amelioration by maleness, all support *hormonal* modulation of the disease. The issue of safety and tolerance of estrogen therapy in the older woman with SLE has not been adequately addressed. Apart from the sex hormones, most attention has been focused on the *thyroid* in view of Hashimoto's thyroiditis being the prototype of organ-specific autoimmune disease. Some investigators, but not all, have found an increase in rheumatic disease or antinuclear antibodies in those with immune thyroiditis. The converse is also true with respect to thyroid disease or anti-thyroid antibodies in SLE. Case reports have focused on SLE with companion thyrotoxicosis or hypothyroidism, but large series of patients with SLE have not demonstrated a significant excess. Tsokos et al<sup>87</sup> reported fourteen patients with type B insulin-resistant *diabetes mellitus* with eight (60 percent) fulfilling criteria for SLE and twelve (86 percent) with ANA-positivity. Furthermore, a patient with SLE and

diabetes mellitus with islet cell antibodies has been reported, but thorough study of the association, clinically and immunologically, is lacking.

## Final Comment

SLE is a complex immunologic disorder with an equally complex clinical presentation and course. Any single feature or combination may reflect the process. With immune-complex vasculitis (a cardinal lesion), tissue involvement is broad and diverse. Earlier recognition of milder disease supported by immunologic markers coupled with means of intervention and suppression, as well as general medical/surgical advances has effected progressive increase in quality of life and survival in recent years. With immunomodulators yet to be determined, further resolution of the disease process becomes feasible.

## References

1. Siegel M, Lee SL. The epidemiology of systemic lupus erythematosus. *Semin Arthritis Rheum*. 1973; 3:1.
2. Fessel WJ. Systemic lupus erythematosus in the community: Incidence, prevalence, outcome and first symptoms. *Arch Intern Med* 1974; 134:1027.
3. Harvey AM, Shulman LE, Tumulty PA, Conley CL, Schoenrich EH. Systemic lupus erythematosus: Review of the literature and clinical analysis of 138 cases. *Medicine* 1954; 33:291.
4. Hochberg MC, Dorsch CA, Feinglass EJ, Stevens MB. Survivorship in systemic lupus erythematosus. *Arthritis Rheum* 1982; 24:54.
5. Cohen AS, Reynolds WE, Franklin EC, Kulka JP, Ropes MW, Shulman LE, Wallace SL. Preliminary criteria for the classification of systemic lupus erythematosus. *Bull Rheum Dis* 1971; 21:643.
6. Tan EM, Cohen AS, Fries J, Masi AT, McShane DJ, Rothfield NF, Schaller JG, Talal N, Winchester RJ. The 1982 revised criteria for the classification of systemic lupus erythematosus. *Arthritis Rheum* 1982; 25:1271.
7. Stevens MB. Systemic lupus erythematosus: Clinical issues. *Springer Semin Immunopathol* 1986; 9:251.
8. Feinglass EJ, Arnett FC, Dorsch CA, Zizic TM, Stevens MB. Neuropsychiatric manifestations of systemic lupus erythematosus: Diagnosis, clinical spectrum and relationship to other features of the disease. *Medicine* 1976; 55:323.
9. Inoue T, Takeda T, Koda S, Negoro N, Okamura M, Amatsu K, Kohno M, Horiguchi T, Kanayama Y. Differential diagnosis of fever in systemic lupus erythematosus using discriminant analysis. *Rheumatol Int* 1986; 6:69.
10. Alarcon-Segovia D, Abud-Mendoza C, Diaz-Jouanen E, Iglesias A, De los Reyes V, Hernandez-Ortiz J. Deforming arthropathy of the hands in systemic lupus erythematosus. *J Rheumatol* 1988; 15:65.
11. Hahn BH, Yardley JH, Stevens MB. "Rheumatoid" nodules in systemic lupus erythematosus. *Ann Intern Med* 1970; 72:49.
12. Cronin ME. Musculoskeletal manifestations of systemic lupus erythematosus. *Rheum Dis Clin North Am* 1988; 14:99.
13. Katz RS, Zizic TM, Arnold WP, Stevens MB. The pseudothrombophlebitis syndrome. *Medicine* 1977; 56:151.
14. Zizic TM, Hungerford DS, Stevens MB. Ischemic bone necrosis in systemic lupus erythematosus: I. the early diagnosis of ischemic necrosis of bone. *Medicine* 1980; 59:134.
15. Provost TT, Reichlin M. Immunopathologic studies of cutaneous lupus erythematosus. *J Clin Immunol* 1988; 8:223.
16. Callen JP. Mucocutaneous changes in patients with lupus erythematosus: The relationship of these lesions to systemic disease. *Rheum Dis Clin North Am* 1988; 14:79.



17. Hahn BH, Yardley JH, Stevens MB. Rheumatoid nodules in systemic lupus erythematosus. *Ann Intern Med* 1970; 72:49.
18. Halla JT, Schrohenloher RE, Volanakis JH. Immune complexes and other laboratory features of pleural effusions - a comparison of rheumatoid arthritis, systemic lupus erythematosus and other diseases. *Ann Intern Med* 1980; 92:748.
19. Matthey RA, Schwarz MI, Petty TL, Stanford RE, Gupta RC, Sahn SA, Steigerwald JC. Pulmonary manifestations of systemic lupus erythematosus: Review of twelve cases of acute lupus pneumonitis. *Medicine* 1974; 54:397.
20. Eagan JW, Memoli VA, Roberts JL, Matthew GR, Schwartz MM, Lewis EJ. Pulmonary hemorrhage in systemic lupus erythematosus. *Medicine* 1978; 57:545.
21. Mintz G, Galindo LF, Fernandez-Diez J, Jimenez J, Robles-Saavedra E, Enriquez-Casillas RD. Acute massive pulmonary hemorrhage in systemic lupus erythematosus. *J Rheumatol* 1978; 5:39.
22. Eisenberg H, Dubois EL, Sherwin RP, Balchum OJ. Diffuse interstitial lung disease in systemic lupus erythematosus. *Ann Intern Med* 1973; 79:37.
23. Eisenberg H, Simmons DH, Barnett EV. Diffuse pulmonary interstitial disease: An immunohistologic study. *Chest* 1979; 75:262.
24. Gibson GJ, Edmonds JP, Hughes GRV. Diaphragm function and lung involvement in systemic lupus erythematosus. *Am J Med* 1977; 63:926.
25. Bulkley BH, Roberts WC. The heart in systemic lupus erythematosus and the changes induced in it by corticosteroid therapy. *Am J Med* 1975; 58:243.
26. Bidani AK, Roberts JL, Schwartz JL, Lewis EJ. Immunopathology of cardiac lesions in fatal systemic lupus erythematosus. *Am J Med* 1980; 69:849.
27. Badui E, Garcia-Rubi D, Robles E, Jimenez J, Juan L, Delcze M, Diaz A, Mintz G. Cardiovascular manifestations in systemic lupus erythematosus: Prospective study of 100 patients. *Angiology* 1985; 36:431.
28. Kindig JR, Goodman MR. Clinical utility of pericardial fluid pH determination. *Am J Med* 1983; 75:1077.
29. Estes D, Christian CL. The natural history of systemic lupus erythematosus by prospective analysis. *Medicine* 1971; 50:85.
30. Starkey RH, Hahn BH. Rapid development of constrictive pericarditis is a patient with systemic lupus erythematosus. *Chest* 1973; 63:448.
31. Jacobsen EJ, Reza MJ. Constrictive pericarditis in systemic lupus erythematosus: Demonstration of immunoglobulins in the pericardium. *Arthritis Rheum* 1978; 21:972.
32. Borenstein DG, Fye B, Arnett FC, Stevens MB. The myocarditis of systemic lupus erythematosus: Association with myositis. *Ann Intern Med* 1978; 89:619.
33. Nimelstein SH, Brody S, McShane D, Holman HR. Mixed connective tissue disease: A subsequent evaluation of the original 25 patients. *Medicine* 1980; 59:239.
34. Singen BH, Bernstein BH, Kornreich HK, King KK, Hanson V, Tan EM. Mixed connective tissue disease in childhood: A clinical and serologic survey. *J Pediatr* 1977; 90:893.
35. Libman E, Sacks B. A hitherto undescribed form of valvular and mural endocarditis. *Arch Intern Med* 1924; 33:701.
36. Galve E, Candell-Riera J, Pigrau C, Permanyer-Miralda G, Garcia-Del-Castillo H, Soler-Soler J. Prevalence, morphologic types and evolution of cardiac valvular disease in systemic lupus erythematosus. *N Engl J Med* 1988; 319:817.
37. Doherty NE, Siegal RJ. Cardiovascular manifestations of systemic lupus erythematosus. *Am Heart J* 1985; 110:1257.
38. Zizic TM, Hungerford DS, Stevens MB. Ischemic bone necrosis in systemic lupus erythematosus. *Medicine* 1980; 59:134.
39. Perez HD, Kramer N. Pulmonary hypertension in systemic lupus erythematosus. *Semin Arthritis Rheum* 1981; XI:1771.
40. Hashimoto H, Shiokawa Y. Changing patterns in the clinical features and prognosis of systemic lupus erythematosus: A Japanese experience. *J Rheumatol* 1982; 9:386.
41. Caeiro F, Michielson FMC, Bernstein R, Hughes GRV, Ansell BM. Systemic lupus erythematosus in childhood. *Ann Rheum Dis* 1981; 40:325.
42. Johansson EA, Niemi KM, Mustakallio KK. A peripheral vascular syndrome overlapping with systemic lupus erythematosus. Recurrent venous thrombosis and hemorrhagic capillary proliferation with circulating anticoagulants and false-positive seroreactions for syphilis. *Dermatologica* 1977; 155:257.
43. Hamilton CR, Tumulty PA. Thrombosis of renal veins and inferior vena cava complicating lupus nephritis. *JAMA* 1968; 206:2315.
44. Sammaritano LR, Gharavi AE, Lockshin MD. Antiphospholipid antibody syndrome: Immunologic and clinical aspects. *Semin Arthritis Rheum* 1990; 20:81.
45. Ford PM, Ford SE, Lillicrap DP. Association of lupus anticoagulant and severe valvular heart disease in systemic lupus erythematosus. *J Rheumatol* 1988; 15:597.
46. Asherson RA, Hughes GRV. The expanding spectrum of Libman-Sacks endocarditis: The role of antiphospholipid antibodies. *Clin Exper Rheum* 1989; 7:225.
47. Urowitz MB, Bookman AAM, Koehler BE, Gordon DA, Smythe HA, Ogryzlo MA. The bimodal mortality pattern of systemic lupus erythematosus. *Am J Med* 1976; 60:221.
48. Spiera H, Rothenberg RR. Myocardial infarction in four young patients with SLE. *J Rheum* 1983; 10:464.
49. Haider YS, Roberts WC. Coronary artery disease in systemic lupus erythematosus: Quantification of degrees of narrowing in 22 necropsy patients (21 women) aged 16 to 37 years. *Am J Med* 1981; 70:775.
50. Mandell BF. Cardiovascular involvement in systemic lupus erythematosus. *Semin Arthritis Rheum* 1987; 17:126.
51. Rosner S, Ginzler EM, Diamond HS and the Lupus Survival Study Group. A multicenter study of outcome in systemic lupus erythematosus: II. Causes of death. *Arthritis Rheum* 1982; 25:612.
52. McCluskey RT. Evidence for an immune complex disorder in systemic lupus erythematosus (SLE). In: Hayslett JP and Hardin JA, eds. *Advances in Systemic Lupus Erythematosus*. New York: Grune and Stratton. 1983; 23-9.
53. Koffler D (ed). Proceedings on the conference on current perspectives on the immunology of systemic lupus erythematosus. *Arthritis Rheum*. 1982; 25:721.
54. Hochberg MC, Boyd RE, Ahearn JM, Arnett FC, Bias WB, Provost TT, Stevens MB. Systemic lupus erythematosus: A review of clinico-laboratory features and immunogenetic markers in 150 patients with emphasis on demographic subsets. *Medicine* 1985; 64:285.
55. Stevens MB. Systemic lupus erythematosus - clinical issues. *Springer Semin. Immunopathol* 1986; 9:251.
56. Baldwin DS, Gluck MC, Lowenstein J, Gallo GR. Lupus nephritis: Clinical course related to morphologic forms and their transitions. *Am J Med* 1977; 62:12.
57. Cameron JS, Turner DR, Ogg CS, Williams DG, Lessof MH, Chantler C, Leibowitz S. Systemic lupus with nephritis: A long-term study. *Q J Med* 1979; 48:1.
58. Appel GB, Cohen DJ, Pirani CL, Meltzer JJ, Estes D. Long-term follow-up of patients with lupus nephritis: A study based on the classification of the World Health Organization. *Am J Med* 1987; 83:877.
59. Balow JE, Austin HA. Renal disease in systemic lupus erythematosus. *Rheum Dis Clin North Am* 1988; 14:117.
60. Edworthy SM, Bloch DA, McShane DJ, Segal MR, Fries JF. A "state model" or renal function in systemic lupus erythematosus: Its value in the prediction of outcome in 292 patients. *J Rheumatol* 1989; 16:29.
61. Esdaile JM, Levinton C, Federgreen W, Hayslett JP, Kashgarian M. The clinical and renal biopsy predictors of long-term outcome in lupus nephritis: A study of 87 patients and review of the literature. *Q J Med* 1989; 72:779.
62. Adelman DC, Saltiel E, Klinenberg JR. Neuropsychiatric manifestations of systemic lupus erythematosus: An overview. *Semin Arthritis Rheum* 1986; 15:185.
63. McCune WJ, Golbers J. Neuropsychiatric lupus. *Rheum Dis North Am* 1988; 14:149.
64. Carbotte RM, Denburg SD, Senburg JA. Prevalence of cognitive impairment in systemic lupus erythematosus. *J Nerv Ment Dis* 1986; 174:357.
65. Lim L, Roos MA, Ormerod LEC, David J, Miller DH, Logsdail



- SJ, Walport MJ, Harding AE. Psychiatric and neurologic manifestations in systemic lupus erythematosus. *Q J Med* 1988; 66:27.
66. Kael AT, Shetty AM, Lee BCP, Lockshin MD. The diversity of neurologic events in systemic lupus erythematosus. *Arch Neurol* 1986; 43:273.
67. Johnson RT, Richardson EP. The neurological manifestations of systemic lupus erythematosus: A clinical-pathologic study of 24 cases and review of the literature. *Medicine* 1968; 47:337.
68. Harris EN, Hughes GRV. Cerebral disease in systemic lupus erythematosus. *Springer Semin Immunopathol* 1985; 8:215.
69. Levine SH, Welch KMA. The spectrum of neurologic disease associated with antiphospholipid antibodies. *Arch Neurol* 1987; 44:876.
70. Bluestein HG, Pischel KD, Woods VL, Jr. Immunopathogenesis of the neuropsychiatric manifestations of systemic lupus erythematosus. *Springer Semin Immunopathol* 1986; 9:237.
71. Denburg JA, Carbotte RM, Denburg SD. Neuronal antibodies and cognitive function in systemic lupus erythematosus. *Neurology* 1987; 37:464.
72. Bonfa E, Golombek SJ, Kaufman LD, Skelly S, Weissbach H, Brot N, Elkon KB. Association between lupus psychosis and anti-ribosomal P protein antibodies. *N Engl J Med* 1987; 317:265.
73. Billingsley LM, Yannakakis GD, Stevens MB. Evoked potentials (EPs) in central nervous system (CNS) systemic lupus erythematosus (SLE). *Arthritis Rheum* 1984; 27:S61.
74. Kremor JM, Rynes RI, Bartholomew LE, Rodichok LD, Pelton EW, Block EA, Tassinari RB, Silver RJ. Non-organic non-psychotic psychopathology (NONPP) in patients with systemic lupus erythematosus. *Semin Arthritis Rheum* 1981; XI:182.
75. Urowitz MB, Stevens MB, Shulman LE. The influence of age on the clinical picture of systemic lupus erythematosus. *Arthritis Rheum* 1967; 10:319.
76. Baker SB, Rovira JR, Campion EW, Mills JA. Late onset systemic lupus erythematosus. *Amer J Med* 1979; 66:727.
77. Gruenberg JC, Van Slyck EJ, Abraham JP. Splenectomy in systemic lupus erythematosus. *Am Surg* 1986; 52:366.
78. Coon WW. Splenectomy for cytopenias associated with systemic lupus erythematosus. *Am J Surg* 1988; 155:391.
79. Espinoza LR, Hartman RC. Significance of the lupus anti-coagulant. *Am J Hematol* 1986; 22:331.
80. Averbuck M, Kolfman B, Levo Y. Lupus anticoagulant, thrombosis and thrombocytopenia in systemic lupus erythematosus. *Amer J Med Sci* 1987; 293:2.
81. Triplett DA, Brandt JT. Lupus anticoagulants: Misnomer, paradox, riddle, epiphenomenon. *Hematol Pathol* 1988; 2:121.
82. Jabs DA, Miller NR, Newman SA, Johnson MA, Stevens MB. Optic neuropathy in systemic lupus erythematosus. *Arch Ophthalmol* 1986; 104:564.
83. Jabs DA, Fine SL, Hochberg MC, Newman SA, Heiner GG, Stevens MB. Severe retinal vaso-occlusive disease in systemic lupus erythematosus. *Arch Ophthalmol* 1986; 104:558.
84. Korbet SM, Block LJ, Lewis EJ. Laryngeal complications in a patient with inactive systemic lupus erythematosus. *Arch Int Med* 1984; 144:1867.
85. Burgess Ed, Render KC. Hypopharyngeal obstruction in lupus erythematosus. *Ann Int Med* 1984; 100:319.
86. Alarcon-Segovia D, Abud-Mendoza C, Reyes-Gutierrez E, Iglesias-Gamara A, Diaz-Jouanen E. Involvement of the urinary bladder in systemic lupus erythematosus. A pathologic study. *J Rheum* 1984; 111:208.
87. Tsokos GC, Gordon P, Antonovych T, Wilson CB, Balow JE. Lupus nephritis and other autoimmune features in patients with diabetes mellitus due to autoantibody in insulin receptors. *Ann Int Med* 1985; 102:176.

# YOCON<sup>®</sup>

## YOHIMBINE HCl

**Description:** Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubiaceae and related trees. Also in *Rauwolfia Serpentina* (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon<sup>®</sup> is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

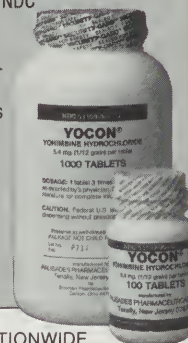
**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon<sup>®</sup> 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

#### References:

1. A. Morales et al., *New England Journal of Medicine*: 1221, November 12, 1981.
2. Goodman, Gilman — *The Pharmacological basis of Therapeutics* 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. *Weekly Urological Clinical letter*, 27:2, July 4, 1983.
4. A. Morales et al., *The Journal of Urology* 128: 45-47, 1982.

Rev. 1/85



AVAILABLE AT PHARMACIES NATIONWIDE

**PALISADES  
PHARMACEUTICALS, INC.**

219 County Road  
Tenafly, New Jersey 07670  
(201) 569-8502  
1-800-237-9083

# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.

## **Magnetic Imaging of Baltimore**



*Lumbar Spine*

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)



---

# Vascular Lesions in SLE

---

Thomas M. Zizic MD

---

*Dr. Zizic is Associate Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD.*

---

*The confusing array of manifestations resulting from multisystem involvement in SLE is due, in part, to the widespread involvement of blood vessels.*

---

The clinical picture of systemic lupus erythematosus (SLE), particularly at its onset, may assume a wide variety of patterns. A single organ system may be involved such as the skin, joints, or kidneys; or several systems may be implicated. The disease may appear with a confusing array of manifestations resulting from multisystem involvement in which it is difficult to detect any obvious continuity. In part, this is due to the widespread involvement of blood vessels in SLE which was first emphasized by Baehr et al in 1935.<sup>1</sup> They described vascular lesions throughout the finer ramifications of the systemic and, at times, the pulmonic circulation. These varied from simple dilatation of the capillary bed in certain areas to proliferative lesions of the lining endothelium of capillaries, arterioles, and venules often associated with thrombi obstructing the lumen. Also noted were degenerative and necrotizing lesions in the wall of such vessels associated at times with thrombosis and hemorrhage into adjacent tissues. Most characteristic was the peculiar hyaline thickening of the capillary walls of the glomeruli which they designated as the wire-loop lesion.

Vascular lesions were encountered during histologic examination of the various organs. These alterations are described together. They were most frequent and most severe in the vessels of the kidneys but were found not infrequently in vessels of almost all the organs and tissues of the body, including those of the lesser circulation. In fact, in certain organs, such as those of the gastrointestinal tract, vascular alterations were the sole manifestations of collagen injury. In addition, renal, central nervous system (CNS), vascular, and infective complications are implicated most often in the mortality of the disease (Table 1).

## Pathology

Although vascular inflammation may be of varying degrees of severity, clinically the term vasculitis is used to denote an inflammatory disease of blood vessels usually resulting in destruction of vessel walls and producing vascular occlusion. In this type of

severe or necrotizing vasculitis, ischemia is the common denominator of tissue injury. In the classic paper on the pathology of SLE, Klemperer et al pointed out that the widespread involvement of blood vessels in SLE resulted in its comparison with periarteritis nodosa in which vascular involvement is, in fact, the fundamental feature.<sup>2</sup> Intense degeneration of collagen in the arteries is essential in both diseases (Table 2). In both, the damage of the collagen in the vessel wall may lead to total necrosis. In periarteritis nodosa, in contrast to lupus erythematosus, such degeneration or necrosis is accomplished by a most conspicuous inflammatory reaction in which the participation of eosinophils is noteworthy. As a rule, in periarteritis nodosa, vessels of larger caliber suffer the greatest damage, while smaller vessels and even capillaries may occasionally be affected. The converse is true of the vascular involvement in lupus erythematosus, in which the rule is: predominant damage of the smaller arteries and capillaries with only infrequent participation of the medium-sized vessels. In the latter, the similarity of the lesions may even suggest periarteritis nodosa microscopically.

The massive destruction of the blood vessel wall leading to hemorrhage, on the one hand, or to aneurysm formation, on the other, is a feature par excellence in periarteritis nodosa. This does not occur in lupus erythematosus except for aneurysms observed only microscopically in a few of the larger arteries.

In SLE, the mildest recognizable change is a deposit of homogeneous eosinophilic material (so-called fibrinoid) within the intima, between muscle fibers of the media, or within the adventitia. It is generally accompanied by fibroblast proliferation. In the intima, this proliferation often results in considerable narrowing of the lumen without any participation of the endothelium. The newly formed fibroblasts generally exhibit degenerative changes as evidenced by distortion of the nuclei and by pyknosis.<sup>2</sup>

Further progression of this process leads to involvement of more and more of the vessel wall so that in the intima, complete rings of fibrinoid masses are laid down, lifting the endothelium from the media and choking the lumen. Intimal masses may fuse with medial masses across the elastic membrane. In turn, fusion with adventitial masses may follow. With complete fibrinoid change of the collagenous framework of the vessel wall, destruction of muscular and elastic elements ensues. In this phase, there is a striking proliferation of adventitial cellular elements which show degenerative changes.

This analysis of the vascular lesions must inevitably reduce them to a mere local expression of the fundamental connective tissue injury. In a morphogenetic sense, the vessel suffers injury only so far as it contains connective tissue.

This is not unreasonable if one considers that a blood vessel consists of specific functional elements (endothelium, muscular fibers, and elastic fibers) bound together by a supporting framework of connective tissue. And it is this tissue, primarily, which bears the brunt of injury in this disease. This is evident in the fibrinoid degeneration of collagen fibers in the adventitia.<sup>2</sup> In contrast to the arteriocapillary system, with its outstanding participation, the veins are infrequently altered. Not only is the inflammatory response in vessels often mild in SLE, but the interactions are primarily local events with mediators working within a short distance of their release. Thus, it is not surprising that there is usually no evidence of vascular inflammation in serologic samples and that a definitive diagnosis of vascular involvement in a given organ system generally requires histologic confirmation. Even tissue samples may not demonstrate the lesions because of the caliber of the vessels involved; the spottiness of the changes with skip areas; and the frequent requirement for intensive anti-inflammatory therapy prior to obtaining tissue. In certain organs, such as the heart, spleen and CNS, tissue samples are generally available only at postmortem examination.

Table 1. Causes of Death in SLE

Causes of Death	Patients
Gastrointestinal vasculitis	5
Infection	4
Renal	3
Neurologic	2
Cardiopulmonary	2
Unknown	2
Unrelated to SLE	1
Total	19

Table 2. Comparison of Vasculitis of SLE and Periarteritis Nodosa (PAN)

	SLE	PAN
Muscular arteries	+	+++
Arterioles	++	++
Capillaries	+++	+
Inflammatory reaction	+	+++
Aneurysms	+/-	+++

Heart

The pathological cause of coronary artery disease in lupus patients as determined by autopsy studies is arteritis, atherosclerosis,<sup>3</sup> or embolic occlusion (Table 3). With the possible exception of rheumatoid vasculitis, coronary vasculitis occurs more commonly in SLE than in other members of the collagen-vascular diseases.<sup>4</sup>

Of the autopsied patients reported by Harvey et al, 55 percent had some form of myocardial involvement;

Table 3. Heart

Coronary Arteries	
Premature atherosclerosis	
Vasculitis	
Embolic occlusion	

in 80 percent of these, the myocardial changes were considered to be due entirely to SLE.<sup>5</sup> At times, the alterations produced in the myocardium by the



lupus process were very extensive; at other times, they were scattered and focal. The intimal lining of the small coronary vessels was sometimes occluded with resultant ischemic necrosis. Fibrinoid degeneration and even necrosis are occasionally observed in the walls of small coronary arteries.<sup>2</sup> These alterations are generally focal. Other vessels may contain organizing eosinophilic masses; whether these are local in origin or embolic cannot be unequivocally determined. Despite a variety of cardiac lesions in SLE, it is the necrotizing vasculitis which frequently leads to fatal coronary thrombosis and myocardial infarction, especially in young patients with SLE.<sup>4</sup> Since the epicardial coronary arteries are normally inaccessible to biopsy, coronary vasculitis is seldom correctly diagnosed clinically and can rarely be verified without histopathology at postmortem examination. Coronary angiograms have documented multiple high-grade stenosis similar to that seen in ordinary coronary artery disease,<sup>6</sup> as well as multiple aneurysms along the course of a major coronary artery consistent with arteritis.<sup>7</sup> Although arteritis of intramyocardial vessels is not uncommon, active arteritis of major coronary arteries is rarely encountered. In most of these cases, there is evidence of active disease in other organ systems as well.<sup>3</sup>

The more common cardiac finding at autopsy of lupus patients is atherosclerosis. Bulkley and Roberts detected significant coronary disease in nine of thirty-six autopsied patients.<sup>8</sup> In eight, the coronary disease was due to atherosclerosis and in the ninth, it was due to an embolus. In this regard, there is a relative absence of deaths from myocardial infarction and atherosclerotic heart disease in the earlier reports, contrasted with a 4 percent incidence in Estes and Christian's<sup>9</sup> group, as well as in that of Dubois et al.<sup>10</sup> The rising incidence of atherosclerosis may be caused by the association of older age in the later series and long-term corticosteroid treatment which has been shown to accelerate this condition.<sup>11</sup>

Bidani and his coworkers performed immunopathological studies on cardiac tissue of ten patients with severe SLE who died.<sup>12</sup> There was positive staining for immune reactants, predominantly immunoglobulin G (IgG), in nine of the ten cases. No staining was detected in two control cases. The pattern of staining was granular, suggesting the presence of immune complex aggregates, and the predominant sites of deposition were in the walls of the blood vessels of the pericardium and myocardium. In another study, it was noted that the frequencies of mitral valvular disease and pericardial adhesions were significantly greater in the group of lupus patients with severe coronary narrowing, suggesting that the severity of the disease itself may be related to the coronary pathology.<sup>13</sup> Some authors have noted lesions of healed or active arteritis in coronary arteries with atherosclerosis, implicating vasculitis in the accelerated atherosclerotic process.<sup>14</sup>

In one-third of the autopsied patients reported by

Harvey et al,<sup>5</sup> the verrucous bacterial vegetation described by Libman and Sacks was found.<sup>15</sup> While the title of their article does not refer to the subject, their report represents the first significant contribution to the morbid anatomy of acute lupus erythematosus. Mural endocardial vegetations may be small and verrucous but are most often yellowish gray, tawny, or pink plaques with an irregular outline, measuring a few millimeters to as much as a centimeter in diameter.<sup>2</sup> They occur nearer the base of the ventricle rather than toward the apex (i.e., in the outflow tracts or in the areas between the valve rings and the tips of the papillary muscle).

The lesions are, in general, verrucous in appearance -- dry, granular, tawny or pink vegetations varying in size from that of a pinhead to 3 or 4 mm. They may be single or conglomerate. The single lesions resemble minute beads or pyramids and are not easily removed from the endocardium. This type is more frequent on the valves. Sometimes they form large mulberry-like clusters which are actually independent from the valvular endocardium. The earliest endocardial change encountered, both mural and valvular, is a subendothelial fibrinoid degeneration of the ground substance.<sup>16</sup> In more advanced lesions, the fibers also undergo the same change. Fibroblast proliferation, degeneration, and necrosis accompany the changes in fibers and ground substance. In the most advanced phase, the connective tissue becomes completely necrotic, and basophilic fragments of nuclei, cytoplasm, and fibers become set in the granular eosinophilic ground substance. Such foci are undoubtedly what Gross characterized as "hematoxylin stained-bodies" and described in great detail.<sup>16</sup>

In the series reported by Klemperer et al, macroscopic endocardial vegetations were evident on 40 percent of the cases. In an additional 20 percent, microscopic examination revealed endocardial lesions that are regarded as the early phase of the grossly visible alterations. In this initial phase, one sees focal clumps of altered ground substance in the superficial connective tissue layers of the valves, frequently just below the intact endothelium. These clumps appear as homogeneous, deeply eosinophilic masses. In this study, a number of vessels contained organizing eosinophilic masses and, although they were not unequivocally embolic in origin, it is of interest that in all but a single case, they were associated with endocardial excrescences. The pathogenesis of Libman-Sacks endocarditis and thrombotic thrombocytopenic purpura (TTP) in SLE may be related. The presence of Libman-Sacks endocarditis in three of the seven patients with clinical TTP raises the possibility that small vessels were occluded by endocardial emboli.<sup>17</sup> In some patients, widespread microemboli from the heart might form the vascular lesion responsible for initial development of microangiopathic hemolytic anemia (MAHA) and other features of TTP. Alternatively, a primary disorder of fibrin metabolism or endothelial cells may facilitate deposition of fibrin and platelets on the en-



dothelium of small vessels and cardiac valves. The lupus anticoagulant, a population of antiphospholipid antibodies, is associated with an increased incidence of systemic and cerebral thromboembolism.<sup>18,19</sup> These antibodies may play a role in the development of lupus endocarditis and TTP.

### Nervous System

Tissue ischemia is the universal common denominator of the vasculitides. Even after the acute inflammation has resolved, ischemia may be sustained by fibrotic narrowing of the vessel wall.<sup>20</sup> The effects of ischemia on the nervous system range from subtle alterations in cellular metabolism,<sup>21,22</sup> to slowed impulse propagation and synaptic transmission,<sup>23,24</sup> to frank infarction. Variability in clinical expression can be explained by the acuteness of the ischemia, the extent of collateral circulation, and the degree of tissue sensitivity to hypoxia and ischemia. SLE is an important cause of cerebrovascular accidents in young people.<sup>25</sup> The accidents may result from several types of pathological events (Table 4). Classic cerebral infarctions with focal neurological deficits occur occasionally as the result of arteritis of medium-sized vessels to the cerebral cortices. In addition, emboli from Libman-Sacks vegetations, thrombotic occlusions related to the presence of the lupus anticoagulant, and intracranial hemorrhage may all induce profound neurological deficits. An interesting feature of this form of CNS lupus is that, in contrast with other manifestations of neurological SLE, cerebrovascular accidents more frequently occur as isolated events without evidence of disease activity elsewhere.<sup>26</sup>

Although the exact incidence is difficult to calculate, many investigators feel that intractable vascular headaches are among the most common of all neurological symptoms in patients with SLE.<sup>25,27,28</sup> These symptoms, in particular, can occur independently of disease activity. A recent study revealed that there is a threefold increase in the prevalence of classic migraine among SLE patients compared with an age- and sex-matched control group.<sup>29</sup> Interestingly, there was no correlation between classic migraine and Raynaud's phenomenon or other manifestations of SLE.

In addition to headaches resulting from vascular pathology, they may also be caused by meningeal irritation, psuedotumor cerebri, or inflammatory disease within the brain parenchyma.<sup>30</sup> Other neurological features may also be difficult to attribute to a single pathologic process or event. For example, deteriorat-

ing consciousness or coma may be caused by a vascular episode, may follow seizures, or may accompany cerebral inflammation. On the other hand, a single pathological event may have multiple etiologies. Vascular episodes such as stroke and subarachnoid hemorrhage may result from chronic renal disease and hypertension or as a result of cerebral arteritis. Some authors, however, have described SLE patients whose initial presenting features were those of cerebrovascular accident or subarachnoid hemorrhage.<sup>31,32</sup> Particularly prior to the advent of corticosteroid therapy, lupus vasculitis involving the central nervous system was a common terminal event.<sup>5</sup> In the fifty-three patients who died in the study of Estes and Christian, CNS involvement accounted for or contributed to death in eleven patients.<sup>9</sup> Seven of these patients had evidence of diffuse cerebral vasculitis and four had cerebrovascular accidents. In our experience, postmortem examination of the CNS was performed in seven patients with neuropsychiatric lupus.<sup>33</sup> A massive intracerebral hemorrhage with secondary necrosis was found in one case. In two, multiple large and small infarcts were noted. In one of these, inflammatory cells were present in the walls of medium-sized vessels; perivascular infiltrates were found around small arterioles. No vascular changes were described in the other case. The other patients in whom vascular changes were noted included one in whom multiple areas of microscopic degeneration were associated with small vessel congestion. Focal 1.5 mm areas of discoloration were noted grossly in one case but were not explained microscopically. Mild frontal lobe atrophy was found in one patient with chronic organic psychosis. No pathologic changes were found on routine examination in one patient despite a florid CNS illness with psychosis and multifocal neurological signs.

In the study reported by Bresnihan, pathological examination revealed no single characteristic lesion.<sup>30</sup> Only ten patients had significant gross lesions: three with a large intracerebral hemorrhage, one with multiple pontine hemorrhages, two small fresh hemorrhages, four with small areas of old infarction, and one with an incidental small subpial hemorrhage. Microscopic abnormalities were much more common and evidence of microinfarcts, often multiple, was seen in twenty of the twenty-four cases. No evidence of emboli was found. Furthermore, true arteritis was only seen in three cases. Other reports describing CNS vasculitis in SLE<sup>34,35</sup> failed to state the diagnostic criteria or based the diagnosis on nonspecific changes such as intimal proliferation or perivascular lymphocytes. Although the low incidence of active CNS vasculitis in SLE may be attributable to glucocorticoid treatment, lesions consistent with healed vasculitis were also uncommon. In spite of its rarity at postmortem examination however, CNS vasculitis is still commonly reported in patients with this disease. Indeed, in seventeen of fifty patients, the clinical diagnosis was CNS vasculitis, al-

**Table 4. Causes of Cerebrovascular Accidents (CVA) in SLE**

Vasculitis
Endocardial emboli
Anticardiolipin syndrome
Sneddon's syndrome (livedo plus CVA)
Thrombotic thrombocytopenic purpura
Hypertension



though it was not found at autopsy.<sup>17</sup> The absence of CNS vasculitis or other neuropathological findings in many patients with SLE who had psychiatric and seizure disorders has suggested that another mechanism (e.g., antineuronal antibodies<sup>36</sup>) must be responsible for abnormalities.

Mintz and Fraga found evidence of CNS disease in five of six SLE patients with widespread arteritis.<sup>37</sup> True vasculitis, with infiltration of all layers of the vessel wall, has been an infrequent neuropathological finding.<sup>35</sup> However, careful pathologic studies by Johnson and Richardson support the concept that "SLE of the nervous system is, in most cases, a vascular disease involving very small vessels."<sup>35</sup>

The higher five-year survival rate for patients with functional psychoses as compared with patients with organic mental syndromes, along with the reported lack of correlation between pathologic findings in the brain and the presence of functional psychoses,<sup>35</sup> suggests that these are related to an acute toxic state or adrenal corticosteroid therapy while the organic mental syndromes represent cerebral vasculitis.<sup>9</sup>

Also supporting the concept of vascular inflammation causing many of the nervous system findings was our finding of the strong association of cutaneous or visceral manifestations of vasculitis with neurologic and psychiatric illness.<sup>33</sup> The likelihood of neuropsychiatric disease secondary to SLE was 62 percent in patients with vasculitis as compared with 28 percent in those without this manifestation. When present in a patient with neuropsychiatric disease, vasculitis generally occurred along with the nervous system illness and occasionally preceded it. Only rarely, in two cases, did vasculitis appear subsequent to neuropsychiatric disease.

Cranial nerve abnormalities occur in 5 to 33 percent of patients with neuropsychiatric lupus.<sup>9,33,35</sup> Both nuclear and peripheral lesions of the cranial nerves have been described. In our experience, fifteen of fifty-two patients with neuropsychiatric lupus developed peripheral neuropathies in the absence of other etiologies. Ten developed mild to moderate sensory (eight) or sensorimotor neuropathies (two) with subacute evolution. Sensory features were predominant in the mixed neuropathies. More classical vascular inflammation involving the vasovasorum occurred in the remaining five patients who developed a multiple mononeuritis.<sup>33</sup> In a large series of autopsy cases, the most common finding was a bland vasculopathy similar to that of hypertensive encephalopathy.<sup>34</sup> On the other hand, true vasculitis, a common finding underlying other systemic features of SLE, was noted in only 7 percent of patients. Similarly, other large series have demonstrated degenerative and proliferative small vessel changes, such as endothelial proliferation, mild perivascular lymphocytic infiltrates, and vascular hyalinization.<sup>28,35</sup> Microinfarctions are frequently noted, but large infarctions are unusual. Therefore, while the underlying pathogenesis of most CNS events remains unclear,

microvascular injury appears to predominate in the majority of affected patients who have been studied pathologically. Several hypotheses have been suggested to explain such widespread microvascular injury.<sup>26</sup> Many have proposed that the neuropsychiatric findings in SLE are related to deposition of soluble immune complexes in the choroid plexus. Initial studies suggested a correlation between clinical CNS abnormalities and deposits of immunoglobulin in the choroid plexus.<sup>38</sup>

Focal vascular events, for example, may be responsible for many strokes, cranial neuropathies, or transverse myelitis, but they are much less likely to be the cause of organic brain syndromes, psychoses, or chorea. It is possible that each neurological manifestation could be induced by a different mechanism or combination of mechanisms, including immune-complex deposition, direct antibody-mediated damage, large-vessel vasculitis, and thrombosis.<sup>25</sup>

Evidence exists in experimental animal models of immune-complex disease that antigen-antibody complexes deposit in the choroid and microcirculation of the brain with subsequent rises in the cerebrospinal fluid (CSF) protein concentration, suggesting injury to the tight junctions that form the blood-brain barrier.<sup>39</sup> Therefore, it is possible that the simultaneous occurrence of vascular injury and brain-reactive antibodies may contribute to the pathogenesis of CNS lupus.

Because antineuronal antibodies are present in higher titer in the CSF of patients with active disease, it can be hypothesized that such antibodies gain access to the CNS after disruption of the choroid plexus or small cerebral blood vessels by immune-complex-mediated damage.<sup>25</sup>

Finally, there are increasing data suggesting that thrombosis may underlie, pathophysiologically, certain neurological events in SLE. Numerous investigators have identified a distinct subset of SLE patients who have circulating autoantibodies directed against complex lipid antigens, such as cardiolipin and the prothrombin-activator complex of the clotting cascade-lupus anticoagulant. These patients have been shown to have a markedly increased incidence of recurrent arterial and venous thromboses, recurrent abortions, thrombocytopenia and, in some patients, acute neurological events.<sup>25</sup>

In a review of fifty autopsied patients with SLE, neuropsychiatric disturbances were present in 74 percent and CNS lesions were present in half the patients.<sup>17</sup> Embolic brain infarcts occurred in ten patients with the cardiac source of the emboli being Libman-Sacks endocarditis in five patients, chronic valvulitis in two patients, and a mural thrombus of the left side of the heart in two patients. Clinical features of TTP developed during the terminal illness in fourteen patients, seven of whom also had pathologic evidence of TTP. Correlation between neuropsychiatric disorders and brain lesions could be made in approximately half the patients. Using current technology, the improved sensitivity of



magnetic resonance imaging (MRI) compared with that of computed tomography (CT) in the CNS, has been demonstrated in the majority of patients with noncalcified nonhemorrhagic brain lesions greater than 3 mm in diameter.<sup>40-43</sup>

Although MRI is quite sensitive, its specificity is limited. In most patients, it would not be possible to suggest a diagnosis of CNS lupus from radiographic findings alone, in the absence of clinical history. For example, it was often not possible to differentiate the focal white matter lesions seen in CNS lupus patients from those found in patients with ischemic disease or multiple sclerosis. However, in a small number of patients, the MRI findings alone can suggest a diagnosis of vasculitis -- for example, a young patient with multiple small gray and white matter lesions in multiple arterial territories.

### Lungs

Even when the lungs themselves are affected, many different pathological processes may occur. These include noninfective acute or chronic pneumonitis and vasculitis resulting variously in infarction, pulmonary hypertension, or pulmonary hemorrhage.<sup>44</sup> Pulmonary vascular involvement in SLE has been reported less frequently than pulmonary parenchymal changes. Baehr and associates found pathologic changes of the pulmonary vessels, particularly fibrinoid necrosis, in twenty-three autopsied cases of SLE.<sup>1</sup> In four of these, the right heart was enlarged. Fibrinoid necrosis of pulmonary arterioles was also described by Klemperer et al.<sup>2</sup> Acute inflammation involving small pulmonary arteries and arterioles was found in 19 percent of forty-four SLE patients autopsied by Gross et al.<sup>45</sup> Fayemi reported a detailed study of the pulmonary vasculature of twenty autopsied SLE patients.<sup>46</sup> The pulmonary vasculature was involved by both acute and chronic lesions of varying severity in eight of the twenty cases studied. Muscular arteries were most often and most severely affected. Fibrinoid necrosis and vasculitis were common. Chronic lesions consisted of intimal fibrosis, medial hypertrophy, alteration of elastic laminae, periadventitial fibrosis and, in one case, aneurysmal dilation. These changes were found variously in arterioles, arteries, and veins. The fibrotic and occlusive vascular lesions may account for the syndrome of unexplained breathlessness that occurs in SLE. In certain individuals, these lesions may progress to overt pulmonary hypertension.<sup>46</sup>

Pulmonary hemorrhage is a recognized manifestation of lung involvement in SLE. Eagen and his associates reported four such patients who had acute pulmonary involvement manifested by dyspnea, cough, hemoptysis, and bilateral pulmonary infiltrates.<sup>47</sup> Three of the four patients died. Immune aggregates were present in all large blood vessels in two patients and focal IgG deposits in a third. Demonstration of

complement component deposition was variable and generally less intense than that observed in the small arteries and veins. Cellular subintimal proliferation, intimal fibrotic plaques, and organized intramural thromboses were observed in many small blood vessels. The deposits were observed in the walls of small blood vessels, and were localized predominantly between the endothelial cells and the basal lamina.

The pattern of immunoglobulin and complement deposition in the lungs in these patients may give insight into the nature of the underlying vascular events. Immunoglobulin deposits appeared to be present in both the pulmonary and bronchial circulations. Thus, these deposits were present in the alveolar septa, in the capillary loops and adjacent interstitium, and in the walls of larger blood vessels and bronchioles. Conceivably, lung hemorrhage could have resulted from disruption of the alveolar septa, but structural damage to other components of the pulmonary or bronchial circulation may also have contributed.<sup>47</sup>

Pulmonary vascular abnormalities are usually related to the presence of pulmonary hypertension which is defined as a prolonged increase of the main pulmonary artery pressure. With increased pulmonary pressure and resistance to blood flow from the right ventricle, the clinical manifestations of right ventricular hypertrophy and cor pulmonale are realized. The pathology of pulmonary vessels in either primary or secondary pulmonary hypertension is similar, and includes medial hypertrophy of small arteries and arterioles, intimal and endothelial cell proliferation, intimal fibrosis and medial muscular hypertrophy, various dilatative lesions, encrustation of the elastica with hemosiderin and, rarely, a necrotizing arteritis.<sup>48</sup> Although pulmonary lesions are common in SLE, only a few patients develop clinical manifestations of pulmonary hypertension and right-heart failure.<sup>46</sup> Baehr et al found pathologic changes and right-heart enlargement while studying the pulmonary vasculature in four of twenty-three autopsied SLE patients.<sup>1</sup> Fayemi found evidence of pulmonary hypertension in eight of twenty autopsied cases of SLE.<sup>46</sup> Perez and Kramer reported four of forty-three cases in which pulmonary hypertension was a major clinical manifestation.<sup>49</sup> All four patients had symptoms and signs of pulmonary hypertension. The echocardiograph showed right ventricular enlargement, and all had pulmonary hypertension documented by cardiac catheterization. Raynaud's phenomenon was present in three of four patients; in one, a severe exacerbation shortly preceded the onset of pulmonary hypertension. It has been reported that extrapulmonic findings such as Raynaud's phenomenon are frequent in those patients with primary pulmonary hypertension.<sup>50</sup> Nair et al<sup>51</sup> reported another case and mentioned the frequent association and its potential pathogenic role in primary pulmonary hypertension in SLE.



## Gastrointestinal Tract

The gastrointestinal manifestations of SLE were first emphasized by Osler in 1895.<sup>52</sup> "By exudative erythema is understood a disease of unknown etiology with polymorphic skin lesions -- hyperemia, edema, and hemorrhage-arthritis occasionally, and a variable number of visceral manifestations, of which the most important are gastrointestinal crises, endocarditis, pericarditis, acute nephritis, and hemorrhage from the mucous surfaces." Gastrointestinal crises (colic usually with vomiting and diarrhea) occurred in all eleven of his patients. Ten (19 percent) of the fifty-two patients reported by Harvey et al had arteritis involving the gastrointestinal tract.<sup>5</sup> In four, the lesions were in the esophagus; in three patients, in the small intestine; and in four patients, in the large intestine. In all cases there was associated ulceration of the underlying mucosa.

Acute abdominal syndromes have been increasingly recognized as the consequence of intra-abdominal vasculitis in patients with SLE.<sup>53</sup> These complications are of particular concern, since numerous clinical entities may simulate disease-related abdominal involvement. As reported earlier, bowel perforation consequent to mesenteric arteritis was the leading cause of death in SLE during the first four years of our Rheumatic Disease Unit's experience (Figures 1A and 1B).<sup>54</sup>

Eleven (73 percent) of the fifteen patients with SLE had exploratory laparotomy for acute abdominal events. Six of these patients had intestinal perforation, five colonic, and one in the small intestine. In general, small vessels were involved, resulting in discrete, localized lesions so that even in the one patient with multiple perforations, there were skip areas with normal-appearing bowel in between. Three patients had pre-perforations in that there was evidence of vasculitis but the bowel wall was still intact. Resolution of the abdominal

syndrome in these patients occurred with corticosteroid augmentation.

Thus, of the eleven patients with SLE requiring operative intervention, nine (82 percent) were found to have evidence of intra-abdominal arteritis. Only two had polyserositis without gross evidence of vasculitis at surgery. Four patients with acute abdominal syndromes promptly responded to corticosteroid augmentation alone, while surgery was being considered.<sup>55</sup>

Peripheral vasculitis (such as recurrent leg ulcers, splinter hemorrhages, and mucous membrane and digital ulcerations), central or peripheral nervous system involvement, thrombocytopenia, and circulating rheumatoid factor (latex 1:160) were significantly increased among those with acute abdomens (Table 5).

Since it is clear that, in contrast to other rheumatic diseases, SLE and periarteritis (PA) more frequently have disease-related abdominal crisis, it is important to recognize the clinical and laboratory features that suggest mesenteric arteritis and to delineate the clinical aspects of the abdominal syndrome which characterize and help differentiate it from other intra-abdominal disorders (Table 6). As previously pointed out by ourselves and Pollack et al, the diagnosis of an acute surgical abdomen due to SLE could be made with confidence only when the patient had concomitant disease activity in other organs.<sup>56</sup>

Table 5. Acute Abdominal Syndromes

Clinico-laboratory Feature	Abdominal (15 patients)	Non-abdominal (125 patients)
Peripheral vasculitis	57%	25%
CNS or PNS	67%	34%
Osteonecrosis	40%	14%
Thrombocytopenia	53%	19%
Rheumatoid factor positive	92%	45%

CNS = central nervous system, PNS = peripheral nervous system

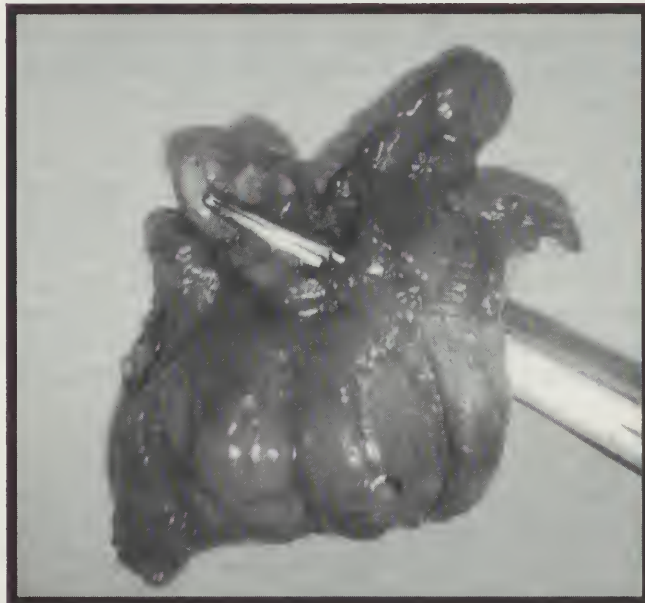


Figure 1A and 1B. Bowel perforations in two patients with mesenteric vasculitis

**Table 6. Symptoms and Signs of Mesenteric Vasculitis\***

Features	% Positive
Abdominal pain	100
Abdominal tenderness	96
Fever	91
Lower quadrant or periumbilical	78
Rebound tenderness	74
Abdominal distension	74
Abdominal guarding	43
Decreased bowel sounds	26
Absent bowel sounds	26
Abdominal wall rigidity	22
	23 patients

\*Adapted from: Zizic TM et al. Acute abdominal complications of systemic lupus erythematosus and polyarteritis nodosa. *Am J Med* 1982; 73:525-31; and Reynolds JC et al. Acute pancreatitis in systemic lupus erythematosus: Report of twenty cases and a review of the literature. *Medicine* 1982; 61:25.

Twenty (8 percent) of 241 patients with SLE reported by Reynolds et al had acute pancreatitis.<sup>57</sup> The majority of patients had severe abdominal pain, nausea, vomiting, fever, and signs of adynamic ileus with abdominal distension and absent bowel sounds. Steroid therapy may be responsible for some of the cases, but the majority occur in the setting of active multisystem SLE and often with evidence of vasculitis elsewhere. When pathology is available, arteritis involving pancreatic vessels is usually present.<sup>58</sup>

Hepatomegaly occurs in 25 to 50 percent of patients with SLE during the course of their illness, and only infrequently is it accompanied by significant functional abnormalities, with jaundice occurring in approximately 5 percent of patients.<sup>58</sup> At postmortem examination, livers of SLE patients may be infiltrated with fat and contain areas of pericentral necrosis. Only rarely are the vascular lesions of SLE seen in the portal areas. Fatty changes were present even before corticosteroid therapy was available, as the pathological findings in the livers of eighteen autopsied lupus patients were slight to moderate with fatty degeneration in six.<sup>59</sup> Similar findings were noted by Harvey et al, since the most common finding histologically was fatty infiltration with, and atrophy and necrosis of, the central hepatic cells.<sup>5</sup> In only two instances were vascular lesions of SLE noted in the portal areas. Several other cases in which small and medium-sized hepatic arteries showed moderate to severe narrowing produced by proliferation of intimal connective tissue have been reported.<sup>2,60</sup>

### Kidneys

In our experience, clinical renal involvement occurs in approximately half the patients with SLE.<sup>33</sup> The alteration thought to be pathognomonic is the so-called wire-loop lesion, present in about 60 percent of the autopsied cases reported by Harvey et al.<sup>5</sup> It con-

sists of an irregularly thickened basement membrane which stains intensely with eosin. It may involve only a single capillary loop or there may be a number of such lesions. The extent of the lesions varies greatly, and whether or not renal insufficiency develops, probably depends on the number of glomeruli involved.

The most frequent microscopic alteration is an endothelial proliferation in the glomerular capillaries which may be mild or severe, leading to occlusion of the vessel and, if extensive enough, to the development of renal insufficiency.<sup>1</sup> Another lesion of fairly common occurrence is focal necrosis of the capillary tufts, frequently associated with hyaline thrombi. These lesions have been interpreted as an exaggerated or extreme form of the wire-loop lesion.

The kidney of malignant nephrosclerosis may be confused with that of lupus erythematosus.<sup>2</sup> However, the severe vascular lesions in the former condition, which are conspicuous in other organs as well as in the kidneys, must be compared with those in lupus erythematosus. In both diseases, necrosis of arterioles is found. In malignant nephrosclerosis, arteriolar necrosis is either associated with or preceded by a homogeneous hyalinization of the entire vessel wall. Early necrosis becomes evident by the migration of red blood cells into the homogenized vessel wall, and definitive necrosis, characterized by actual hemorrhagic infarction of the vessel itself, supervenes. An indistinguishable end result may be established in lupus erythematosus not by necrosis within an already hyalinized vessel, but by fibrinoid necrosis occurring in a previously normal vessel.

### Miscellaneous

Dermal vasculitis developed in thirty-one of 150 patients, progressing to chronic ulceration in fourteen and gangrene in two.<sup>9</sup> In our experience, peripheral vasculitis was present in thirty-nine (28 percent) of 140 patients and included recurrent (often refractory) leg ulcers, digital ulcers (Figure 2), mucous membrane lesions, splinter hemorrhages, and skin eruptions often characterized by tender indurated lesions.<sup>33</sup> Purpura is often non-thrombocytopenic in origin. Thus, of 100 patients with SLE seen at the Mayo Clinic, purpura was noted in ten; in all instances, it was thought to be vascular in origin.<sup>45</sup>

While fibrinoid degeneration is the most spectacular expression of this alteration in lupus erythematosus, the disturbance may also, to a lesser degree, manifest itself in sclerosis of collagen. This is particularly evident in the splenic lesions, and was present in nineteen of twenty autopsied patients.<sup>2</sup> This is a peculiar periarterial fibrosis limited to the central and penicilliary arteries. In cross sections of these vessels, the fibrosis assumes a pattern of concentric rings of stout collagen fibers, with few intercalated fibroblasts. The distinctive pattern clearly precludes confusion with trabeculae that bear arteries. The rings are apparently





**Figure 2.** Digital vasculitis with distal gangrene

formed by slow collagenization of adventitial reticulum fibers. The earliest reference to this nearly pathognomonic periarterial fibrosis or onion skinning of splenic arteries in SLE is that of Libman and Sacks.<sup>15</sup>

A number of vascular alterations in the eye can be seen, including hemorrhage, embolic petechias, perivasculitis, and retinal arterial occlusion.<sup>5</sup> Arteritis or phlebitis of the small vessels is seen in muscles and cannot be distinguished with certainty from that seen in periarteritis nodosa and rheumatoid arthritis.<sup>5</sup>

Livedo is the term first used to describe a violet discoloration of the skin due to a local circulatory disturbance.<sup>6</sup> The skin of the thighs, shins, and/or forearms is most often affected. As the name implies, it has a reticular or flattened cobblestone appearance, with areas of clinically normal skin encircled and demarcated from adjacent areas by a narrow livid blue or red band.

Livedo occurs as a result of disordered blood flow through subpapillary and dermal blood vessels. It may occur as a physiologic reaction to cold exposure and in such diverse states as connective tissue disease, polyarteritis nodosa, cold agglutinin disease, cryoglobulinemia, and Sneddon's syndrome.<sup>61-65</sup>

Sneddon first described the rare syndrome of livedo reticularis and cerebrovascular disease in 1965.<sup>65</sup> Characteristically, the cerebrovascular disease develops at a relatively young age, often in a multifocal pattern, and in an otherwise healthy person. Although biopsy material was not available from this patient, Sneddon postulated that arteritis obliterans was the common underlying pathologic event.

The association between livedo reticularis and cerebrovascular disease, originally described by Sneddon in otherwise healthy individuals, also applies to lupus patients.<sup>66</sup> Elevated anticardiolipin antibody levels (ACLA) were present in 81 percent of lupus patients with livedo reticularis as compared with 15

percent in the livedo-negative SLE patients. A history of thrombosis and thrombocytopenia -- clinical associates of anticardiolipin antibody -- were also significantly more common in SLE patients with livedo reticularis.

In the past few years, attention has been focused on the possible relationship between some of the clinical manifestations of SLE and the presence of antibodies to phospholipids.<sup>67-72</sup>

Recurrent fetal loss, venous thrombosis (particularly when recurrent), thrombocytopenia, hemolytic anemia, and leg ulcers were found to associate with ACLA, albeit somewhat less strongly. Anticardiolipin antibodies may also play a role in the development of Libman-Sacks endocarditis and TTP in SLE.<sup>17</sup> In one study, fourteen (28 percent) of the patients had a clinical profile consistent with TTP late in their illness.<sup>17</sup> The diagnosis of TTP was made if four of the five following features developed in the last two months of the patient's life: (1) MAHA, (2) thrombocytopenic purpura, (3) renal dysfunction, (4) neurological signs and symptoms, and (5) fever.

The clinical differentiation of TTP from the underlying illness or disseminated intravascular coagulation (DIC) in patients with SLE may be difficult. The diagnosis of TTP should be considered in any patients with SLE in whom there is rapid deterioration in multiple systems in association with MAHA. MAHA is the only component of the TTP pentad that is not characteristic of SLE.<sup>73</sup> However, MAHA may develop in patients with widespread small vessel disease such as systemic vasculitis, malignant hypertension, and DIC.

Johnson and Richardson reported that three (12.5 percent) of their twenty-four patients died of "acute CNS disease" with wide-spread cerebral vascular changes of TTP.<sup>35</sup> In another series, an antemortem diagnosis of TTP was made in only one patient; in the other thirteen, the clinical diagnosis included exacerbation of SLE, DIC, and vasculitis.<sup>17</sup>

Raynaud's phenomenon occurs in 21 to 23 percent of patients with SLE.<sup>9,33</sup> It is often an early manifestation and, generally, is non-progressive. We previously have demonstrated an increased incidence of vasculitis and Raynaud's phenomenon in SLE patients with ischemic necrosis of bone.<sup>74,75</sup> We believe that both Raynaud's phenomenon and vasculitis may cause a decrease in extraosseous blood flow. Interestingly, we have recently demonstrated that the increase in bone marrow pressure in two patients was decreased with the administration of a calcium channel blocker.<sup>76</sup>

### Pathogenesis

Although the immunological mechanism causing the various types of vasculitis are incompletely understood, there are three basic types: (1) passive deposition of immune complexes; (2) direct antibody attack on the vessel; and (3) cell-mediated immune mechanisms (T-cell/endothelial cell interactions) which pre-



sumably underlie most clinical types of primary vasculitis.<sup>20</sup>

Despite their presence in the circulation, immunoglobulin and complement are not generally found in vessel walls *in vivo*. Therefore, normal endothelium appears to have a limited capacity to interact with either immune complexes or complement. However, in SLE and other forms of vasculitis, high titers of autoantibodies and immune complexes persist in the circulation, and immunoglobulin and complement are found in vessel walls.<sup>77,78</sup>

Immune complexes in the vessel wall can be identified by immunofluorescence early, but are usually removed by neutrophils within twenty-four to forty-eight hours.<sup>20</sup> Subsequent activation of complement initiates immune adherence reactions including release of chemotactic factors, anaphylatoxins (C3a and C5), and formation of the membrane attack complex.<sup>79</sup> Infiltrating neutrophils bind to the complexes. There is phagocytosis and release of enzymes, inflammatory peptides, and oxygen radicals.<sup>80</sup> The generation of peroxide and hydroxyl radicals is important in the mediation of injury.<sup>81</sup> Mononuclear cells and plasma cells appear later.<sup>20</sup>

Immune-mediated tissue damage is a complex and dynamic sequence of events.<sup>48</sup> These events can be simplified into three stages, the first of which is that of immune complex formation. This is dependent on the ability of the host to recognize the putative antigen as foreign and thus elicit a humoral immune response. The nature of the response is critical, since factors such as the class and quantity of antibody produced, as well as the avidity of the immune response, will all be important factors in the resultant size of the immune complexes. Size appears to be a critical factor not only in regional deposition of the immune complexes but also in the ability of the reticuloendothelial system to clear them from the circulation. The nature of the antigen is important since this will determine the rate at which the host will endogenously metabolize its rate of clearance.

The larger sized lattices are more effective in activating complement and mediating the immunopathological effects. Complexes in great antibody or antigen excess are much less toxic than those formed at equivalence. The antibody type and subclass determine subsequent tissue damage.<sup>82,83</sup>

The factors governing immune complex deposition appear to be at least equally, if not more, complicated. The role of hydrostatic forces and the release of vasoactive substances appear to be critical factors in determining the target organ of immune complex deposition. Factors such as size of the immune complex, the charge of the complex, and the nature of the antigen also appear to be important factors in deposition.<sup>48</sup>

Immune complex clearance appears to be the final kinetic factor that determines duration of exposure to the complexes. For the most part, immune complexes are readily cleared by the reticuloendothelial system

through interaction with Fc and, to a lesser extent, C3b receptors.<sup>48</sup>

Animals that produce low titers of antibodies in response to antigen demonstrate a degenerative vasculopathy associated with the deposition of immune complexes in the vessel wall. Animals that produce higher levels of antibody show a more prominent cellular response.<sup>20</sup>

Murine models of SLE develop varying levels of vascular disease. MRL/lpr mice are prone to a necrotizing vasculitis; other mice, including NZB/W FI and BSXB strains, more frequently develop a degenerative vasculopathy. Serologic analysis reveals that the vasculitis in the MRL/lpr is associated with the relatively late development of high levels of autoantibodies and circulating immune complexes. Degenerative vascular disease in the other mice is associated with early onset of autoantibody production of low magnitude, giving rise to persistently low levels of circulating immune complexes.<sup>84</sup> This may well be similar to SLE in humans; in association with chronically circulating immune complexes, a degenerative vasculopathy occurs although, less often, vasculitis may also be seen.<sup>85</sup>

Another study of the MRL/1 mouse strain has found IgG-rheumatoid factors complexed with IgG-anti-deoxyribonucleic acid (DNA) in this murine model. These investigators suggest that these rheumatoid factors and antinuclear antibodies, singly or in combination, may be pathogenetic for the inflammatory lesions.<sup>86</sup> Whether or not thrombocytopenia is a feature of this murine syndrome has not been studied. Such would be of interest, however, in view of the observations of Yeatts et al showing release of vasoactive amines from platelets exposed to insoluble complexes.<sup>87</sup>

The clinical association of rheumatoid factor in high titer in rheumatoid arthritis patients with vasculitis has been shown by many.<sup>88-92</sup> A variety of anti-gamma globulin factors has been implicated in the pathogenesis of rheumatoid vasculitis, including conventional 19S rheumatoid factor,<sup>88</sup> a low molecular weight IgM,<sup>93</sup> an IgG with antiglobulin activity,<sup>93</sup> and cryoprecipitable antigamma activity.<sup>94</sup> Numerous experimental studies have also implicated IgM rheumatoid factors in vascular damage. Baum et al demonstrated that rheumatoid factor reacting with antigen-antibody complexes is deposited on endothelium when infused in rat mesentery, suggesting that the deposition of rheumatoid factor mediates vasculitis.<sup>95</sup> One may wonder if analogous to this experimental model of mesenteric arteritis, such factors affected the patients we reported with bowel perforations secondary to vasculitis.<sup>53,54</sup>

Although most attention has been focused on DNA-anti-DNA immune complexes, in some patients, other antibody systems may be responsible for the vasculitis. The presence of anticomplement antibody has usually been associated with the CREST (calcinosis, Raynaud's phenomenon, esophageal dysfunction, sclerodactyly, telangiectasis in scleroderma) variant of scleroderma.<sup>96</sup>



Although it occurs in only 1 percent of patients with SLE, two of three recently reported lupus patients with this antibody had digital vasculitis.<sup>97</sup>

Endothelial cells enclose lymphocytes within the vascular space. The same endothelial cells also emit signals that direct the traffic of lymphocytes to certain areas, present antigens, recruit inflammatory cells, affect coagulation, and permit passage of cells through the lining of the vessel wall into the tissue beyond.<sup>20</sup> Moreover, since these cells are in direct contact with circulating antibody, immune complexes, complement, and effectors of cell-mediated immunity, immune injury to endothelial cells may play a role in the pathogenesis of several immune vascular disorders, including SLE.<sup>77</sup>

IgG anti-endothelial antibodies have been demonstrated in the sera of patients with active SLE.<sup>77</sup> These sera may also contain IgG complexes capable of binding to endothelial cells. Binding of SLE-IgG and heat aggregated-IgG to endothelium initiated complement activation, deposition of the third component of complement, secretion of prostacyclin from endothelial cells, and adherence of platelets, confirmed by scanning electron microscopy.<sup>77</sup> More recently, autoantibodies to vascular endothelial cell antigens were detected in eighteen of twenty-one patients with SLE in the study.<sup>98</sup> This autoantibody was highly cytotoxic, complement-fixing, and specific for antigens on the surface of the vascular endothelial cell.

Additionally, and perhaps centrally in some vasculitides, the endothelium releases the mediators governing chemotaxis and adherence of leukocytes, changes in structure and permeability of the vessel wall, and molecular and cellular transport across the endothelial cell barrier.<sup>20</sup> Cytokines such as interferon, interleukin-1, and tumor necrosis factor, released during the inflammatory response, increase class II expression by the endothelial cells, thereby recruiting more inflammatory cells. Interleukin-1 and other cytokines also induce thromboplastin, prostacyclin, and platelet-activating factors from endothelial cells, resulting in altered vascular permeability and thrombosis.<sup>99</sup>

## References

1. Baehr G, Klemperer P, Schiffrin A. A diffuse disease of the peripheral circulation (usually associated with lupus erythematosus and endocarditis). *Trans Assoc Am Physicians* 1935; 50:139.
2. Klemperer P, Pollack AD, Baehr G. Pathology of disseminated lupus erythematosus. *Arch Pathol* 1941; 32:569.
3. Chang RW. Cardia manifestations of SLE. *Rheum Dis* 1982; 8:197-206.
4. Lie JT. Coronary vasculitis. A review in the current scheme of classification of vasculitis. *Arch Pathol Lab Med* 1987; 111:224-33.
5. Harvey AM, Shulman LE, Tumulty PA, Conley CL, Schoenrich EH. Systemic lupus erythematosus. *Medicine* 1954; 33:291-437.
6. Bonfiglio TA, Botti RE, Hagstrom JWC. Coronary arteritis, occlusion, and myocardial infarction due to lupus erythematosus. *Am Heart J* 1972; 83:153-8.
7. Heibel RH, O'Toole JD, Curtiss EJ, Medsger TA, Reddy SP, Shaver JA. Coronary arteritis in systemic lupus erythematosus. *Chest* 1976; 69:700-3.
8. Bulkley BH, Roberts WC. The heart in systemic lupus erythematosus and the changes induced in it by corticosteroid therapy. *Am J Med* 1975; 58:243-64.
9. Estes D, Christian A. The natural history of systemic lupus erythematosus by prospective analysis. *Medicine* 1971; 50:85-95.
10. Dubois E, Wierzbicki M, Cox M, Weiner J. Duration and death in systemic lupus erythematosus. *JAMA* 1974; 227:1399-1402.
11. Kalbak K. Incidence of arteriosclerosis in patients with rheumatoid arthritis receiving long-term corticosteroid therapy. *Ann Rheum Dis* 1972; 31:196-200.
12. Bidani AK, Roberts JL, Schwartz MM, Lewis EJ. Immunopathology of cardiac lesions in fatal systemic lupus erythematosus. *Am J Med* 1980; 69:849-58.
13. Haider YS, Roberts WC. Coronary arterial disease in systemic lupus erythematosus: Quantification of degrees of narrowing in 22 necropsy patients (21 women) aged 16 to 37 years. *Am J Med* 1981; 70:775-81.
14. Ropes MW. Characteristics, manifestations, and pathologic findings. In: Ropes MW, ed. *Systemic Lupus Erythematosus*. Cambridge, MA: Harvard University Press. 1976; 50-4.
15. Libman E, Sacks B. A hitherto undescribed form of valvular and mural endocarditis. *Arch Intern Med* 1924; 33:701-32.
16. Gross L. The cardiac lesion in Libman-Sacks disease with a consideration of its relationship to acute diffuse lupus erythematosus. *Am J Pathol* 1940; 16:375-408.
17. Devinski O, Petito C, Alonso D. Clinical and neuropathological findings in systemic lupus erythematosus: The role of vasculitis, heart emboli, and thrombotic thrombocytopenic purpura. *Ann Neurol* 1988; 23:380-4.
18. D'Alton J, Preston D, Bormanis J et al. Multiple transient ischemic attacks, lupus anticoagulant, and verrucous endocarditis. *Stroke* 1985; 16:512-4.
19. Elias M, Elser A. Thromboembolism in patients with the "lupus"-like circulation anticoagulant. *Arch Intern Med* 1984; 144:510-14.
20. Moore PM. Immune mechanisms in the primary and secondary vasculitides. *J Neurosci* 1989; 93:129-45.
21. Ochs S, Hollingsworth D. Dependence on fast axoplasmic transport in nerve on oxidative metabolism. *J Neurochem* 1971; 18:107-14.
22. Duffy TE, Nelson SE, Lowry OH. Cerebral carbohydrate metabolism during acute hypoxia and recovery. *J Neurochem* 1972; 19:959-77.
23. Wright EB. The effects of asphyxiation and narcosis on peripheral nerve polarization and conduction. *Am J Physiol* 1947; 148:174-84.
24. Gibson G, Shimada M, Blass JP. Alterations in acetylcholine synthesis and cyclic nucleotides in mild cerebral hypoxia. *J Neurochem* 1978; 31:757-60.
25. Golbus J, McCune WJ. Neuropsychiatric lupus: Clinical features, pathophysiology, diagnosis, and treatment. *Intern Med* 1987; 8:141-69.
26. Bluestein HG. Neuropsychiatric disorders in SLE. In: Lahita RG, ed. *Systemic Lupus Erythematosus*. New York: John Wiley and Sons Inc. 1987; 593-614.
27. Grigor R, Edmonds J, Lewkonja R, Breshnihan B, Hughes GRV. Systemic lupus erythematosus: A prospective analysis. *Ann Rheum Dis* 1979; 37:121-8.
28. Abel T, Gladman DD, Urowitz MB. Neuropsychiatric lupus. *J Rheumatol* 1980; 7:325-33.
29. Isenberg DA et al. A study of migraine in systemic lupus erythematosus. *Ann Rheum Dis* 1982; 41:30.
30. Bresnihan B. CNS lupus. *Clin Rheum Dis* 1982; 8:183-95.
31. Silverstein A. Cerebrovascular accidents as the initial major manifestation of lupus erythematosus. *N Engl J Med* 1963; 63:2942-48.
32. Casey EB, Symon L. Systemic lupus erythematosus presenting as subarachnoid hemorrhage and space occupying lesion. *Brit J Dermatol* 1971; 84:157-60.
33. Feinglass EJ, Arnett FC, Dorsch CA, Zizic TM, Stevens MB. Neuropsychiatric manifestations of systemic lupus erythematosus: Diagnosis, clinical spectrum, and relationship to other features of the disease. *Medicine* 1976; 55:323-39.



34. Ellis S, Verity M. Central nervous system involvement in systemic lupus erythematosus. *Semin Arthritis Rheum* 1979; 8:212-21.
35. Johnson R, Richardson E. The neurological manifestations of systemic lupus erythematosus. *Medicine* 1968; 47:337-69.
36. Bonfa E, Golombek S, Kaufman L et al. Association between lupus psychosis and anti-ribosomal P protein antibodies. *N Engl J Med* 1987; 317:265-71.
37. Mintz G, Fraga A. Arteritis in systemic lupus erythematosus. *Arch Intern Med* 1965; 116:55.
38. Atkins CJ, Kondon JJ, Quismorio FP, Friou GJ. The choroid plexus in systemic lupus erythematosus. *Ann Intern Med* 1972; 76:65.
39. Harbeck RJ, Hoffman AA, Hoffman SA, Shueard DW. Cerebrospinal fluid and the choroid plexus during acute immune complex disease. *Clin Immunol Immunopathol* 1979; 13:413-25.
40. Bradley W, Waluch V, Yadley R, Wycoff R. Comparison of CT and MR in 400 patients with suspected disease of the brain and central spinal cord. *Radiology* 1983; 152:514-29.
41. Bydder G, Steiner R, Young I, Hall A, Thomas D, Marshall J, Pattis C, Legg N. Clinical NMR imaging of the brain: 140 cases. *AJR* 1982; 139:215-36.
42. Johnson M, Li D, Bryant D, Payne J. Magnetic resonance imaging: Serial observations in multiple sclerosis. *AJNR* 1984; 5:495-9.
43. McCune W, MacGuire A, Aisen A, Gebarski S. Identification of brain lesions in neuropsychiatric systemic lupus erythematosus by magnetic resonance scanning. *Arthritis Rheum* 1988; 31:159-66.
44. Strokes LT, Warwick MT. Intrathoracic manifestations of SLE. *Clinics Rheum Dis* 1982; 8(1).
45. Gross M, Esterly JR, Earle RH. Pulmonary alterations in systemic lupus erythematosus. *Am Rev Respir Dis* 1972; 105.
46. Fayemi AO. Pulmonary vascular disease in systemic lupus erythematosus. *Am J Clin Pathol* 1976; 65:284-90.
47. Eagen JW, Memoli VA, Roberts JL, Matthew GR, Schwartz MM, Lewis EJ. Pulmonary hemorrhage in systemic lupus erythematosus. *Medicine* 1978; 57:545-60.
48. Segal AM, Calabrese LH, Ahmad M, Tubbs RR, White CS. The pulmonary manifestations of systemic lupus erythematosus. *Semin Arthritis Rheum* 1985; 14:202-24.
49. Perez HD, Kramer N. Pulmonary hypertension in systemic lupus erythematosus: Report of four cases and review of the literature. *Semin Arthritis Rheum* 1981; 11:177-81.
50. Walcott G, Burchell HB, Brown AL Jr. Primary pulmonary hypertension. *J Med* 1970; 49:70-9.
51. Nair SS, Askari AD, Popelka CG et al. Pulmonary hypertension and systemic lupus erythematosus. *Arch Intern Med* 1980; 140:109-11.
52. Osler W. On the visceral complications of erythema exudativum multiforme. *Am J Med Sci* 1985; 110:629.
53. Zizic TM, Classen JN, Stevens MB. Acute abdominal complications of systemic lupus erythematosus and polyarteritis nodosa. *Am J Med* 1982; 73:525-31.
54. Zizic TM, Shulman LE, Stevens MB. Colonic perforations in systemic lupus erythematosus. *Medicine* 1975; 54:11-426.
55. Zizic TM, Stevens MB, Classen JN. Abdominal syndromes in systemic lupus erythematosus (SLE) and polyarteritis (PA): Predisposing factors. *Arthritis Rheum* 1978; 21:606.
56. Pollack VE, Grove WJ, Kark RM, Muehrcke RC, Pirani CL, Steck IE. Systemic lupus erythematosus simulating acute surgical condition of the abdomen. *N Engl J Med* 1958; 259:258-66.
57. Reynolds JC, Inman RD, Kimberly R et al. Acute pancreatitis in systemic lupus erythematosus: Report of twenty cases and a review of the literature. *Medicine* 1982; 61:25.
58. Zizic TM. Gastrointestinal Manifestations. In: Schur PH, ed. *The Clinical Management of Systemic Lupus Erythematosus*. New York: Grune & Stratton. 1983; 153-66.
59. Griffith GC, Vural IL. Acute and subacute disseminated lupus erythematosus: A correlation of clinical and postmortem findings in 18 cases. *Circulation* 1951; 3:492.
60. Hargraves M. The L.E. cell phenomenon. *Proc Staff Meet Mayo Clin* 1949; 24:234.
61. Champion RH. Livedo reticularis. A review. *Br J Dermatol* 1965; 77:167-79.
62. Copeman DWM. Livedo reticularis. Signs in the skin of disturbance of blood viscosity and of blood flow. *Br J Dermatol* 1975; 93:519-29.
63. Rose VL, Kwaan HC. Anti-Pr cold hemagglutinin associated with livedo reticularis. *Am J Hematol* 1985; 19:419-21.
64. Sangster JMK, Kenwright MG, Walker WP, Pembroke AC. Anti-blood group M autoantibodies with livedo reticularis, Raynaud's phenomenon and anemia. *J Clin Pathol* 1979; 32:154-7.
65. Sneddon IB. Cerebrovascular lesions and livedo reticularis. *Br J Dermatol* 1965; 77:180-5.
66. Englert HJ, Loizou S, Derue GGM, Walport MJ, Hughes GRV. Clinical and immunologic features of livedo reticularis in lupus: A case control study. *Am J Med* 1989; 87:408-10.
67. Alarcon-Segovia D, Margarita D, Oria C, Sanchez-Guerrero J, Gomez-Pacheco, Cabiedes J, Fernandez L, Ponce de Leon S. Antiphospholipid antibodies and the antiphospholipid syndrome in systemic lupus erythematosus: A prospective analysis of 500 consecutive patients. *Medicine* 1989; 68:353-74.
68. Alarcon-Segovia D. Pathogenetic potential of antiphospholipid antibodies. *J Rheumatol* 1988; 15:890-3.
69. Derksen R, Bouma B, Kater L. The prevalence and associations of the lupus anticoagulant in systemic lupus erythematosus. *Scand J Rheumatol* 1989; 16:768-72.
70. Gastineau D, Kazmier F, Nichols W, Bowie E. Lupus anticoagulant: An analysis of the clinical and laboratory features of 219 cases. *Am J Hematol* 1985; 19:265-75.
71. Harris E, Gharavi A, Hughes G. Antiphospholipid antibodies. *Clin Rheum Dis* 1985; 11:591-609.
72. Harris E, Hughes G, Gharazi A. Antiphospholipid antibodies: An elderly statesman dons new garments. *J Rheumatol* 1987; 14(suppl):208-13.
73. Dacie J. *The Haemolytic Anemias*. New York: Grune and Stratton. 1967.
74. Klipper AR, Stevens MB, Zizic TM, Hungerford DS. Ischemic necrosis of bone in systemic lupus erythematosus. *Medicine* 1976; 55:251.
75. Zizic TM, Hungerford DS, Stevens MB. Ischemic bone necrosis in systemic lupus erythematosus. The early diagnosis of ischemic necrosis of bone. *Medicine* 1980; 59:134.
76. Zizic TM. Osteonecrosis. *Curr Opin Rheumatol* 1991.
77. Cines DB, Lyss AL, Reeber M, Bina M, Dehoratius RJ. Presence of complement fixing anti-endothelial antibodies in systemic lupus erythematosus. *J Clin Invest* 1984; 73:611-25.
78. Fauci A, Haynes B, Katz P. The spectrum of vasculitis. Clinical, pathologic, immunologic, and therapeutic considerations. *Ann Intern Med* 1978; 89:660-76.
79. Soter NA, Austen KF. Pathogenetic mechanisms in the necrotizing vasculitides. *Clin Rheum Dis* 1980; 6:233-53.
80. Henson PM. Antibody and immune-complex-mediated allergic and inflammatory reactions. In: Lachman PJ, Peters DK, eds. *Clinical Aspects of Immunology*. 4th edition. Oxford: Blackwell Scientific Publications. 1982; 687.
81. Fligel SEG, Waro PA, Johnson KJ, Till GO. Evidence for role of hydroxyl radical in immune-complex-induced vasculitis. *Am J Pathol* 1984; 115:375-82.
82. Joselov SA, Mannik M. Localization of preformed circulation immune complexes in murine skin. *J Invest Dermatol* 1984; 82:335-40.
83. Mannik M. Experimental model for immune complex-mediated vascular inflammation. *Acta Med Scand* 1987; 715:145-55.
84. Berden JHM, Hang L, McConahey PJ, Dixon FJ. Analysis of vascular lesions in murine SLE. *J Immunol* 1983; 130:1699-705.
85. Korbet SM, Schwartz MM, Lewis EJ. Immune complex deposition and coronary vasculitis in systemic lupus erythematosus. *Am J Med* 1984; 77:141-6.
86. Izui S, Eisenberg RA. Circulating anti-DNA rheumatoid factor complexes in MRL/lmice. *Clin Immunol Immunopathol* 1980; 15:536-51.
87. Yeatts RP, Turner R, Collins R, Kaufmann J, Mashburn H. Soluble and insoluble immune complex-platelet interactions in rheumatoid inflammation. *Ann Rheum Dis* 1978; 37:421-7.



88. Epstein WV, Englemen EP. The relation of the rheumatoid factor content of serum to clinical neurovascular manifestations of rheumatoid arthritis. *Arthritis Rheum* 1959; 2:250-8.
89. Bywaters EG, Scott JT. The natural history of vascular lesions in rheumatoid arthritis. *J Chronic Dis* 1963; 16:905-14.
90. Vaughan JH, Jacox RF, Abraham G, Clark R. Relation of rheumatoid factor to intracellular inclusions. *Ann N Y Acad Sci* 1969; 168:111-21.
91. Gordon DA, Stein JL, Broder I. The extraarticular features of rheumatoid arthritis. *Am J Med* 1973; 54:445-52.
92. Veys EM, Gabriel PA, Coigne E, Meilants H. Rheumatoid factor and serum IgM, IgM and IgA levels in rheumatoid arthritis with vasculitis. *Scan J Rheumatol* 1976; 5:1-6.
93. Theofilopoulos AW, Burtonboy G, Lospalluto JJ, Ziff M. IgM rheumatoid factor and low molecular weight IgM. An association with vasculitis. *Arthritis Rheum* 1974; 17:272-84.
94. Weisman M, Zvaifler N. Cryoimmunoglobulinemia in rheumatoid arthritis. Significance in serum of patients with rheumatoid vasculitis. *J Clin Invest* 1975; 56:725-39.
95. Baum J, Stastny P, Ziff M. Effect of rheumatoid factor and antigen-antibody complexes on the vessels of the rat mesentery. *J Immunol* 1964; 93:985-92.
96. Tan EM, Rodnan GP, Garcia I, Moroi Y, Fritzler MJ, Pebbles C. Diversity of antinuclear antibodies in progressive systemic sclerosis: Anticentromere antibody and its relationship to CREST syndrome. *Arthritis Rheum* 1980; 23:617-25.
97. Goldman JA. Anticentromere antibody in patients without CREST and scleroderma: Association with active digital vasculitis, rheumatic and connective tissue disease. *Ann Rheum Dis* 1989; 48:771-5.
98. Brasile LR, Kremer JM, Clarke JL, Cerilli J. Identification of an autoantibody to vascular endothelial cell-specific antigens in patients with systemic vasculitis. *Am J Med* 1989; 87:74-80.
99. Bussolino F, Breviario F, Tetta C, Aglietta M, Mantovani A, Dejana E. Interleukin-1 stimulates platelet-activating factor production in cultured human endothelial cells. *J Clin Invest* 1986; 77:2027-33.

**"THE BEST CARE ANYWHERE"**

## **Advanced-Care** AMBULANCE



**665-0550**

RADIO DISPATCHED  
CLEAN MODERN VEHICLES  
24 HOURS A DAY - 7 DAYS A WEEK  
FULLY LICENSED EMERGENCY MEDICAL TECHNICIANS  
LOCAL AND LONG DISTANCE TRANSPORTS  
WE BILL MAJOR INSURANCE COMPANIES  
MEDICARE AND MEDICAID APPROVED

LOCATED IN THE  
MITCHIERLING BUILDING • 9413 HARFORD RD.

# Succeed In The 90's With

# SMART C·H·A·R·T

## Computerized Medical Records

Did you know that most doctors spend about 40% of their time recording and trying to decipher patient histories from traditional Medical Charts?

Smart Chart's unique software package affords quick and easy access to medical records.

By using Smart Chart, you will have more time to...

- See patients
- Conduct research
- Enjoy yourself!

Call Smart Chart, Inc. today and see how easy it is to *Succeed in the 90's with Smart Chart!*

MAIL OR FAX THIS COUPON TO:

Smart Chart, Inc.

11212 Grandview Avenue, Suite 108

Wheaton, Maryland 20902

1-800-783-7825

301-946-7825 (Metro. D.C.)

Fax 301-762-2831

**YES! I am interested in Smart Chart.**

Name \_\_\_\_\_

Company \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

# You Will Affect the Future of Medicine



## The Medical Manager<sup>®</sup> can affect the future of your practice.

The nation's #1 selling software (more than 10,000 systems installed nationwide) helps you in numerous ways.

- ♦ Filing claims electronically means you get payment faster.
- ♦ Increases staff efficiency.
- ♦ You have automated recall notices.
- ♦ Patient demographic data can help your practice grow.

The Medical Manager<sup>®</sup> is available for as little as \$250. per month on a lease/purchase option.

Call and we'll come to your office, review your needs, and prepare purchase and lease estimates with NO OBLIGATION. Once we install The Medical Manager<sup>®</sup> we'll train your staff and provide *on-going support* when you need it.

**CALL TOLL FREE**  
**1 (800) 776-2454**

**P R I S M**  
MEDICAL SYSTEMS

Baltimore, MD  
(301) 494-0992

Fairfax, VA  
(703) 359-0777

Richmond, VA  
(804) 330-9225

Winchester, VA  
(703) 662-4545

The Medical Manager<sup>®</sup> is marketed nationally by Systems Plus, Inc., a California corporation. Systems Plus, Inc., is a registered trademark of Systems Plus, Inc. The Medical Manager<sup>®</sup> is a registered trademark of Personalized Programming, Inc.



---

# Autoantibodies and SLE

---

Carol M. Ziminski MD

---

*Dr. Ziminski is Assistant Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD.*

---

*Systemic lupus erythematosus is characterized by an enormous and increasing array of antibodies to cellular constituents. These autoantibody phenomena are not diagnostic in themselves but must be interpreted within the context of the individual clinical situation.*

---

Systemic lupus erythematosus (SLE) may be considered the prototype of autoimmune disease. The diagnosis of SLE is often a clinical one, based on the patient's history, physical examination, and clinical course. The catalog of known autoantibody specificities in SLE is large and growing. Table 1 represents a partial list of known autoantibodies. The presence or absence of particular autoantibodies may influence the confidence with which this diagnosis is made.<sup>1</sup> The relationship between autoantibodies and the clinical manifestations of SLE is not entirely clear. The circumstantial evidence that antibodies are responsible for clinical disease is powerful, and yet there is meager direct evidence implicating autoantibodies in immunopathogenesis of the clinical disease. The detection, clinical relevance, and characterization of the most extensively studied autoantibodies in lupus patients are presented here, as well as some of the theoretical ideas of how autoantibodies participate in the pathogenesis of lupus.

The contention that autoantibodies are themselves important in disease expression is consistent with the following evidence.<sup>2</sup> First, antibodies in the serum are associated with particular clinical manifestations. Second, the finding of immunoglobulin deposition in tissues of patients is consistent with these antibodies being pathogenic. Third, in individual patients, antibodies with particular specificities have been shown to be concentrated in tissues affected by the disease. Fourth, the close association of congenital problems such as complete heart block and neonatal lupus dermatitis with particular maternal autoantibodies suggests the participation of maternal immunoglobulin G (IgG) transported across the placental membranes. Finally, an ingenious animal model has shown that the capacity of antibodies to deposit in human skin is dependent upon the specificity of the antibody.<sup>3</sup>

The following discussion of autoantibody phenomena is not exhaustive and techniques are described for only the most important and frequent tests. One current nomenclature convention is that antigen-antibody systems are named after the patient in whom the antigen or antibody was discovered. The first two letters

**Table 1. Autoantibodies in SLE**

Antibody System	Prevalence in SLE (%)	Clinical Associations	Other Disorders	Laboratory Associations
ANA	90-95	Non-specific	Many (RA, Sjogren's,...)	None
Anti-dsDNA	40-60	Nephritis	Rare	Hypocomplementemia
Anti-ssDNA	90-95	None	Many	None
Anti-Sm	25-35	Isolated CNS disease	None	Anti-nRNP
Anti-nRNP	40-50	Raynaud's, myositis	Overlap syndrome	Anti-Sm
Anti-Ro	25-40	Sicca, photo sensitivity	SCLE, homozygous C <sub>2</sub> deficiency, Sjogren's Neonatal lupus	Hyperglobulinemia rheumatoid factor, less ANA, anti-DNA Maternal antibody
Anti-histone	30-40	Drug-induced lupus (95%) Idiopathic lupus (30-40%)		Other ANAs absent Other ANAs present
Anti-phospholipid	(?)	Thrombosis (arterial, venous), fetal loss		BFP-STs, lupus anticoagulant, anti-cardiolipin

CNS = central nervous system, BFP-STs = biologic false positive - serologic test for syphilis, ANA = antinuclear antibody, RA = Rheumatoid arthritis, SCLE = subacute cutaneous lupus erythematosus

of the patient's last name are identified; thus, there are anti-Sm, anti-Ro, and anti-La antibodies. An alternate convention is to name the autoantibody system after the disease in which it is most frequently found; thus, there is anti-SS-A, so termed because of its presence in Sjogren's syndrome. Once the molecular nature of the antigen is known, the name may be modified to reflect this, as in the anti-DNA (deoxyribonucleic acid) and anti-nRNP (nuclear ribonucleoprotein) systems.

### Lupus Erythematosus Cell Phenomenon

The recognition of the lupus erythematosus (LE) cell<sup>4</sup> was a landmark observation which initiated the study of antibodies to nuclear antigens. The LE cell is a complex phenomenon that depends on the presence of a specific factor in serum or other body fluids -- that is, an antibody that reacts with nucleoprotein (particularly histones) from the nuclei of damaged cells. As a result of this interaction, the nuclear material is altered and becomes chemotactic for polymorphonuclear leukocytes that surround the nuclear material to form rosettes. Phagocytosis (primarily by neutrophils -- less often by eosinophils, monocytes, lymphocytes, or plasma cells) leads to the formation of the LE cell. It was long believed that the LE phenomenon was solely an *in vitro* phenomenon, but it is now evident that LE cells can be found *in vivo*, particularly in extravascular areas such as the synovial fluid and pleural fluid. Cells breaking down in these areas provide nuclei available for phagocytosis. In tissues, the LE inclusion material is believed to have its counterpart in the hematoxylin body.

This test has relative specificity for SLE (65 to 98 percent), although LE cells may be seen in other disorders, but it is not a sensitive assay (50 to 90 percent) and, as such, is not particularly useful as a screening test.<sup>5,6</sup>

The LE test, although still performed in many laboratories, is being replaced by tests that are more sensitive and specific. The important information that the LE cell test provides is that the patient has antibodies to whole desoxyribonucleoprotein or histones. With available modern technology, more sophisticated assays can be employed to detect this and other autoantibodies.

### Antinuclear Antibody

The term antinuclear antibody (ANA) is a generic one referring to the universe of autoantibodies reactive with nuclear antigens. The indirect immunofluorescent test is considered to be the most reliable screening test for ANA and for SLE.<sup>7,8</sup> Antinuclear antibodies appear in almost all patients with SLE, as well as in a variety of other conditions including older age. The ANA test is performed by first fixing a cell substrate to a microscope slide. (Animal organs such as mouse liver or human cell cultures are most frequently used). A dilution of patient serum is then placed on the slide, which leads to attachment of immunoglobulin (Ig) molecules with antinuclear specificity. The cells are subsequently stained with fluorescein-conjugated antibody against human immunoglobulin. Fluorescence microscopy is used to demonstrate the presence of fluorescence (reflecting binding of the fluorescein-tagged antihuman Ig) and the pattern of fluorescence.

The sensitivity of the test depends upon the tissue substrate used. When cell culture lines (e.g., Hep2) are used as the tissue substrate, the ANA titer for any given sample is higher than if animal organs (e.g., mouse liver, rat kidney) are used.<sup>9</sup> A positive test can alert the clinician to a variety of antibodies that are of interest for future study.

Reports of ANA tests commonly include titer and pattern. It is important that serum be titrated in order to provide a semiquantitative value to the level of antibody present in the serum. Four basic patterns of ANA immunofluorescence have been recognized (Table 2), which may be helpful in delineating clinical subsets.<sup>2,6,10,11</sup> More than one pattern may occur in an individual patient, suggesting that more than one antibody system is present.

1. *Homogeneous* (diffuse) staining is produced when antibodies react with the entire nuclear substance (antibodies to desoxyribonucleoprotein -- anti-



**Table 2. ANA Patterns of Immunofluorescence**

Pattern	Molecular Association	Clinical Association
Homogenous (diffuse)	DNP, histone (+ LE cell)	SLE, RA ...
Peripheral (membranous)	Native (double- stranded) DNA	SLE ...
Speckled	ENA: Sm, nRNP; Ro, La	SLE, SS, Sjogren's
Nucleolar	Nuclear RNA-protein	SS ...

DNP = desoxyribonucleoprotein, RA = rheumatoid arthritis,  
ENA = extractable nuclear antigen, SS = systemic sclerosis

DNP). It is this antibody to nucleoprotein that produces the LE phenomenon under appropriate conditions. This pattern is the most common one, but also the least specific. It may be seen in 10 to 70 percent of rheumatic diseases (especially SLE and rheumatoid arthritis), as well as in other conditions such as chronic active hepatitis.

2. A *membranous* or peripheral pattern (rim, ring) is generally produced by antibody to native (n) or double-stranded (ds) DNA. This pattern is most frequently seen in patients with active SLE, particularly those with renal disease. The presence of antibodies to DNA (anti-DNA) can be confirmed by further studies with specific DNA substrates (discussed below).
3. *Speckled* staining represents antibodies to a group of substrates which are saline-soluble and easily extractable from nuclei. This pattern is the expression of a variety of antigenic specificities, a few of which have now been characterized. These antigens as a group have been referred to as extractable nuclear antigens (ENA). Speckled staining can be seen in a variety of disorders, including SLE, rheumatoid arthritis (RA), systemic sclerosis (SS), Sjogren's syndrome, and overlap syndromes with mixed features of several disorders.
4. A *nucleolar* pattern is rare and results from specific staining of nucleoli by antibody. It is often associated with other patterns. The antigenic activity has been attributed to a low molecular weight ribonucleic acid (RNA)-protein.

It must be emphasized that these patterns are not specific for disease-association, and may indeed vary depending on the testing technique (substrate) used. The fluorescent ANA test is not standardized as to the type of antigenic substrate or conjugated antiserum used, nor is there a universal criterion for a positive result. A discrepancy in results from different laboratories is usually the result of different test methods. Furthermore, 3 to 5 percent of SLE patients who are ANA-negative may have at least one positive result if their serum is tested on multiple antigenic substrates.

Disparate results from different clinical laboratories must be evaluated and reconciled. The clinician should be more persistent in pursuing a negative ANA result in the face of impressive clinical data for SLE than in

being concerned about a positive result accompanying limited or nonspecific clinical findings. The first situation could be due to variations in ANA testing, or may reflect the presence of unusual autoantibodies. The second situation requires continued observation of the patient. It must be emphasized that the ANA is *not* the "lupus test." That is, a positive ANA does not mandate the diagnosis of SLE.

Positive ANA test results are found in up to 10 percent of patients with discoid lupus erythematosus without systemic involvement. A positive ANA may portend the development of such involvement in some but not all patients. Because the frequency of low-titer ANA positivity increases with age in the normal population, a positive ANA is much more significant in a young patient with discoid LE than in an older one.<sup>11</sup>

A negative test for ANA occurs in about 5 percent of patients with otherwise typical SLE. Almost two-thirds of these patients have serum antibodies to Ro or La or both. Of the remainder, the great majority have antibodies to single-stranded DNA (ssDNA) demonstrable by radioimmunoassay (RIA).<sup>12</sup> The presence of these autoantibodies tends to be confirmatory but must be accompanied by clinical findings consistent with SLE in order to establish the diagnosis of SLE.

Antinuclear antibodies may decrease in titer or become undetectable following treatment of SLE. In general, however, the ANA test is not an accurate reflection of disease activity and, by itself, has little prognostic value.

In summary, the ANA test is a highly sensitive test of low specificity. It is useful as a screening test. A negative test is strong evidence against the presence of disease, while a positive test does little to establish a specific diagnosis, although the test is positive in ~95 percent of patients with SLE. Other techniques have been used to characterize further the autoantibodies seen in SLE and other diseases.

### Antibodies to DNA

Antibodies to DNA (anti-DNA) have been of central interest in the immunology of SLE since their discovery by several groups of investigators in the late 1950s.<sup>13-15</sup> The development of serologic methods has led to increasing sensitivity and precision in the detection of these antibodies. Current methods allow detection and quantitation of antibodies to both nDNA or dsDNA and ssDNA. Immunofluorescence on *Critidia* substrate measures only anti-dsDNA, as *Critidia luciliae* is a trypanosome-like organism, the kinetoplast of which contains a high concentration of dsDNA.<sup>16</sup> Alternate methods employing RIA and enzyme-linked immunosorbent assay (ELISA) techniques are readily adapted to measure either anti-ssDNA or anti-dsDNA.<sup>17,18</sup>

Antibodies to dsDNA are very specific for SLE and may fluctuate with disease activity.<sup>19</sup> Such antibodies may be a harbinger of renal disease, particularly when



associated with hypocomplementemia. There is considerable evidence for an important pathogenic role for the antibody itself or dsDNA-anti-dsDNA immune complexes in the clinical expression of disease, but details of the mechanism remain unexplained. The predominant theories of renal injury are that preformed immune complexes deposit directly in the glomerulus, that DNA is trapped and bound *in situ* by the anti-DNA antibody, or that anti-DNA binds directly to the basement membrane.<sup>20,21</sup>

Antibodies to ssDNA occur with even higher frequency in SLE than do antibodies to dsDNA, but are also observed in patients with other systemic rheumatic diseases and occasionally in normal persons. This antibody, therefore, has little diagnostic specificity. However, this should not be interpreted to mean that anti-ssDNA is pathogenetically unimportant. Indeed, it has been shown that anti-ssDNA can be eluted from the glomeruli of SLE patients and that it is present in the form of immune complexes in such tissue. In some patients with SLE, the level of anti-ssDNA may correlate with disease activity.<sup>6,11</sup>

### Antibodies to Nonhistone Antigens

A heterologous group of autoantibodies is characterized by reactivity with soluble nonhistone nuclear proteins and RNA protein complexes. Most of these acidic proteins are readily extractable in physiologic buffers. They can be detected by immunodiffusion methods using the appropriate antigen extracts and reference serum.<sup>2,6,11</sup> Precipitating lines representing different antibody systems can be demonstrated readily by Ouchterlony gel double-diffusion. There are four of these RNA-protein conjugate antigens, antibodies to which are made with substantial frequency in SLE patients: nRNP (40 to 50 percent), Sm (25 to 35 percent), Ro/SSA (25 to 40 percent), and La/SSB (10 to 15 percent).

*Antibodies to Sm and nRNP - the ENA complex.* The designation ENA originally referred to extractable nuclear antigen which reacted with serum from SLE patients. It has become clear that many nuclear antigens, particularly nonhistone antigens, are readily extractable. By common usage, the term ENA now generally designates two nonhistone antigens -- Sm and nRNP.<sup>22</sup>

The Sm antigen is a nonhistone protein which is not dependent on DNA or RNA for its antigenicity. Anti-Sm binds to a group of ribonucleoproteins associated with small nuclear uridine-rich RNAs. The antibodies to nuclear ribonucleoprotein (anti-nRNP) are partially related to Sm immunologically. The particle bound by anti-nRNP is also composed of an RNA component designated U1 (for uridine-rich), complexed to a group of proteins, hence the alternate terminology anti-U1RNP. The frequent simultaneous occurrence of antibodies to Sm and nRNP has been noted, and immunochemical studies have shown that Sm and nRNP antigens associate in molecular complexes

referred to as small nuclear RNP (snRNP) complexes. There exists also a molecular form of Sm free of nRNP.<sup>2,6,11,22</sup>

The clinical significance of antibodies to Sm and nRNP has received much attention. There is general agreement that antibodies to the Sm antigen are highly specific for SLE, although detected in less than one-third of patients.<sup>17</sup> To underscore its importance, anti-Sm antibody was included with antibody to dsDNA, the LE cell test, and a biologically false positive test for syphilis (BFP -- discussed below) as one of four sub-items in an immunologic criterion in the revised criteria for the classification of SLE.<sup>1</sup> No characteristic clinical features are apparent for this group of patients, although there have been reports that the nephritis of such patients is mild and follows a benign course.<sup>23</sup> Antibodies to Sm in the absence of other autoantibodies have been associated with isolated central nervous system disease in lupus.<sup>24</sup>

Antibodies to nRNP may be seen in ~40 percent of SLE patients, particularly those with Raynaud's phenomenon and myositis. Classically, patients with anti-nRNP have mild disease, a low frequency of antibodies to DNA, and a low frequency of clinically apparent renal disease.<sup>25</sup> These SLE patients with anti-nRNP develop nephritis only when antibodies of other specificities are present, notably anti-DNA.<sup>26</sup> Nephritis may also occur when anti-nRNP is associated with antibodies to Sm or Ro. It should be noted that anti-Sm and anti-nRNP have been reported with both increased and decreased frequencies of renal involvement in SLE.<sup>10,27,28</sup>

A group of patients with anti-nRNP and with overlapping features of SLE, scleroderma, and polymyositis has generated much discussion. It has been suggested by some that such patients be separated into a distinct group called mixed connective tissue disease.<sup>29</sup> The only uniform finding in these patients is, by definition, the presence of antibodies to nRNP, which also occurs in SLE patients without overlapping features. A substantial fraction of these patients develop systemic sclerosis or polymyositis, or eventually fulfill criteria for SLE, suggesting that anti-nRNP may not be a marker for a distinct clinical entity.<sup>30</sup> What is lacking is a fundamental understanding of etiology and pathogenesis of these disorders, after which the issue of nomenclature will be moot.

*Antibodies to Ro/SSA and La/SSB.* Autoantibodies to the soluble antigens Ro and La were originally described in patients with SLE and Sjogren's syndrome. These antigens are both RNA-protein conjugates which were thought to be cytoplasmic in origin, and were termed small cytoplasmic ribonucleoproteins (scRNPs). The Ro and La antigens have subsequently been shown to be identical to the nuclear antigens SSA and SSB.<sup>2,11,22</sup> Although all RNA is synthesized in the nucleus, much RNA is eventually found in the cytoplasm. Thus, the cellular localization of these antigens may vary with different stages of the cell cycle.



Anti-Ro autoantibodies may occur with anti-La. Nearly all patients with La precipitins also have Ro precipitins. Anti-Ro is also associated with rheumatoid factor, which may represent binding to similar structural features on Ro and immunoglobulin.<sup>2</sup>

Anti-Ro, with or without anti-La, appears in 25 to 40 percent of SLE patients.<sup>11</sup> It is of interest that anti-Ro is one of the most common autoantibodies found in normal individuals or in asymptomatic relatives of patients with rheumatic diseases. The anti-Ro antibody is often the major antibody system found in patients with ANA-negative SLE.<sup>12</sup>

ANA-positive, anti-Ro SLE patients often have prominent sicca features and photosensitivity. A high frequency of rheumatoid factor and hyperglobulinemia has been noted in 75 to 80 percent of these patients.<sup>31</sup> Within the subset of ANA-positive SLE patients who have anti-Ro, there are important clinical and serologic distinctions between patients who produce anti-Ro *alone* and those who produce *both* anti-Ro and anti-La.<sup>32</sup> There is great similarity in nonrenal findings in these two groups of patients, but the frequency and severity of renal disease differs significantly. More than half of anti-Ro positive patients have evidence of nephritis, but less than 10 percent of the anti-Ro and anti-La patients have such evidence. The serologic correlation of this difference in renal disease was the presence of anti-DNA in three-quarters of the anti-Ro group but in only one-third of the anti-Ro and anti-La group. The titers of both anti-dsDNA and anti-ssDNA were higher in patients with only anti-Ro than in those with both anti-Ro and anti-La.

The designation, subacute cutaneous lupus erythematosus (SCLE), identifies a variant of lupus with a characteristic nonscarring dermatitis.<sup>33,34</sup> Patients are often markedly photosensitive, and develop widespread annular and polycyclic skin lesions. Systemic features are mild. These patients are often ANA-negative, but two-thirds will have anti-Ro antibodies. The common factor shared by ANA-negative SLE patients and SCLE patients which may relate to their mild systemic disease and the low frequency of nephritis is the low frequency of antibodies to dsDNA.

It has also been reported that up to three-quarters of SCLE patients are DR3 positive, a significant increase above the control frequency for this particular human lymphocyte antigen (HLA).<sup>34</sup> These data suggest that a set of genetic determinants in the major histocompatibility complex (MHC) is associated with the production of anti-Ro.

Further data supporting a genetic influence on anti-Ro production emerge from a study of the most common hereditary deficiency of complement -- homozygous C2 deficiency.<sup>35</sup> The genes for C2 are known to reside in the MHC on chromosome 6. Approximately one-third of such patients develop a lupus-like syndrome marked by photosensitivity and widespread annular skin lesions like SCLE. Systemic features are not severe;

there are generally low or insignificant titers of ANA or anti-dsDNA. Anti-Ro may be present in up to 85 percent of these patients. Since all homozygous C2-deficient patients studied so far carry the DR2 antigen, it appears that antibodies to Ro can be associated with either DR2 or DR3.

The anti-Ro antibody system, seen in a variety of clinical situations, may have a special ability to initiate injury to skin, which may explain its close link to photosensitivity and the development of cutaneous lupus lesions.<sup>36</sup>

Evidence for anti-Ro antibodies being pathogenic comes from an additional source. Complete congenital heart block and cutaneous lesions, the major clinical features of neonatal lupus, are associated with antibodies to Ro or La or both in virtually every child and mother evaluated in this clinical setting.<sup>37,38</sup> Available pathologic specimens have shown subendocardial fibrosis and, occasionally, infiltration by inflammatory cells.<sup>39</sup> Subendocardial deposition of immunoglobulin and complement has also been documented.<sup>40</sup> Transplacental passage of maternal IgG anti-Ro antibody to the fetus cannot be the only causative factor. Neonatal lupus with congenital heart block has been reported in one fraternal twin born to an anti-Ro positive mother, but not in the other twin who also had anti-Ro antibodies.<sup>41</sup> The cutaneous features, with photosensitivity and annular lesions similar to those seen in SCLE, generally appear within the first two months of life. The dermatitis and the anti-Ro antibody disappear over the same six-month interval, suggesting the possible participation of anti-Ro in the pathogenesis of the dermal lesion. Only a minority of the mothers have SLE and most are asymptomatic, but the subsequent emergence of autoimmune disease has been reported.<sup>38,42</sup> Although the presence of anti-Ro antibody is a strong risk factor for the neonatal lupus syndrome, many normal babies are born to anti-Ro positive mothers.

A final note of genetic interest emerges from the study of a child with neonatal lupus in which both mother and daughter had antibodies to Ro and La.<sup>43</sup> HLA typing revealed the mother was DR3 and the child was DR2. The initially asymptomatic mother developed some evidence of Sjogren's syndrome seventeen months after delivery. Such data suggest that anti-body production in the mother, and clinical expression of disease in the infant, are controlled by independent factors.

The anti-Ro antibody system also occurs in Sjogren's syndrome. The presence of anti-Ro has been associated with extraglandular features such as vasculitis, with hematologic abnormalities, with hyperglobulinemia, with cryoglobulinemia, and with rheumatoid factor.<sup>44</sup> The antibody specificities are not as diverse as in lupus. Up to 95 percent of Sjogren's patients may have anti-Ro, while 85 percent or more may have anti-La.<sup>45</sup> The features of SLE and Sjogren's syndrome often overlap, and it should not be surprising if many of the



fundamental processes of the two disorders are eventually discovered to be similar.

### Antibodies to Histones

Histones are basic nuclear proteins that are integral molecular components of the nucleosome (DNA, histones). Antihistone antibodies classically produce a homogeneous pattern when demonstrated by immunofluorescence on routine screening for ANAs; positive LE cell preparations are frequently seen in this setting.

Antibodies to histone may occur in one-third of patients with idiopathic SLE, but occur in almost all patients with drug-induced LE.<sup>46</sup> The differentiation of drug-induced lupus from idiopathic SLE may present a clinical problem in a patient with features of lupus but no renal involvement. Patients with idiopathic SLE usually have ANAs with multiple immunologic specificities, as discussed above, which can include anti-histone antibodies. A patient with drug-induced lupus will have autoantibodies only to histone and an absence of other immunologic specificities.<sup>14,22</sup> Studying the complete ANA profile is thus important in this clinical setting.

Early reports in the 1940s and 1950s related probable drug-induced lupus syndromes to the administration of sulfonamides and penicillin. Since then, more than fifty agents have been implicated in this syndrome and its associated laboratory abnormalities.<sup>47,48</sup> Several mechanisms for these findings have been postulated, but no one mechanism has been established as pre-eminent. The clinical syndrome, when it does occur, is characterized by fever, myalgias, polyarthralgias, polyarthritis, and polyserositis (pleuritis, pericarditis, and peritonitis). The syndrome generally resolves on discontinuation of the drug, although the ANA may remain positive for months or even years.

Procainamide is the most frequent cause of drug-induced lupus. Approximately 50 percent of patients taking procainamide will become ANA-positive within one year; and one-half of these may develop clinical symptoms. Slow acetylators phenotypes are more likely to develop drug-related lupus at lower doses of the drug. Toxicity is not clearly associated with higher doses. The incidence of drug-induced lupus seems to be lower with the newer acetyl procainamide.

Hydralazine may cause a similar clinical syndrome to that seen with procainamide. This syndrome is also frequently seen in slow acetylators, is more common in women, and is seen more often in those possessing the HLA-DR4 antigen. Other agents have also been implicated in the development of drug-related ANA-positive lupus.

### Anti-phospholipid Antibodies

There has been intense research in recent years to evaluate the importance of antibodies to phospholipids (Table 3). These have been recognized since the turn of the century, when Wasserman described a type of

**Table 3. Phospholipid Antibodies**

Biologic false-positive test for syphilis (BFP-STS)  
(+) VDRL, (-) fluorescent antitreponemal antibody (FTA)

Lupus anticoagulant (LAC)

Prolonged aPTT

Russell viper venom time (RVVT)

Kaolin clotting time (KCT)

Anticardiolipin antibody (aCL)

antiphospholipid antibody (aPL), the reagent associated with syphilis. If a patient has a positive reaction to the Venereal Disease Research Laboratories (VDRL) test, but a negative fluorescent antitreponemal antibody (FTA), it is concluded that the VDRL is a biologic false-positive reaction. It subsequently became clear that there were two types of biological false-positive serologic tests for syphilis (BFP-STS): acute, usually associated with virus or other infection, and chronic, frequently associated with the presence of rheumatic disease.<sup>49</sup> The association with SLE is so strong that the American Rheumatism Association (renamed the American College of Rheumatology) criteria for SLE include the BFP-STS.<sup>1</sup> Antiphospholipid antibodies may occur without evidence of rheumatic disease in the primary anti-phospholipid antibody syndrome (PAPS).<sup>50,51</sup>

A circulating anticoagulant also is evidence of an antiphospholipid antibody. The lupus anticoagulant (LAC) was originally described in two patients with hemorrhagic complications -- and thrombocytopenia.<sup>52</sup> In the absence of thrombocytopenia, clinically significant bleeding does not occur, and these patients have the complications of a procoagulant state.<sup>53</sup> The term lupus anticoagulant is doubly paradoxical -- the phenomenon can be seen in non-SLE patients, and thrombotic events are prominent.

There are several assays that have been used to detect the LAC. The most sensitive assays seem to be the kaolin clotting time (KCT) and the Russell viper venom time (RVVT). The activated partial thromboplastin time (aPTT), probably the most frequently used test in clinical studies, is less sensitive than the KCT or RVVT.<sup>51</sup> A prolongation of clotting time in these assays is due to the presence of a circulating anticoagulant if the clotting time remains prolonged after mixing patient plasma with normal plasma. This approach may be regarded as a functional measurement of a subset of antiphospholipid antibodies.

A test for antibodies to a specific phospholipid, cardiolipin (one of the antigens used in the VDRL test), involves a very different assay from the one used in the lupus anticoagulant test. This test detects subpopulations of overlapping but not identical antibodies.<sup>54,55</sup> Most laboratories use an ELISA technique to measure anticardiolipin (aCL).

Most authors conceive of antiphospholipid antibodies as representing a spectrum of antibodies including the BFP-STS, the lupus anticoagulant, and



anticardiolipin antibody.<sup>51,56</sup> Controversy persists as to which test provides greater predictive value for clinical complications. Patients with the antiphospholipid antibody syndrome may present with clinical features of arterial and venous thrombotic events (including stroke, pulmonary emboli, and deep venous thrombosis) and fetal loss. Less frequent manifestations are migraine, chorea, livedo reticularis, and endocardial lesions. At the laboratory level, thrombocytopenia may be intermittent, and when present, may be associated with bleeding. Hemolytic anemia and positive Coombs' tests have also been reported. Treatment for the antiphospholipid antibody syndrome has not yet been clearly defined, but therapy with both anticoagulants and immunosuppressives has been attempted.

### Hematologic Autoantibodies

Autoantibodies can be important mediators of the hematologic abnormalities in systemic lupus. Anemia is common in SLE, but in only a small portion of patients is it due to Coombs' positive autoimmune hemolytic anemia.<sup>5,57</sup> Leukopenia ( $< 4000$  per  $\text{mm}^3$ ) occurs frequently in SLE (40 to 80 percent of patients) and involves both the granulocytes and lymphocytes. Leukopenia may be mediated by immune complexes or complement-mediated aggregation. Lymphopenia ( $< 1500$  per  $\text{mm}^3$ ) may be one of the most common manifestations of lupus and is usually mediated by anti-T-cell autoantibodies.<sup>58</sup> Thrombocytopenia is less common than anemia or leukopenia, with approximately one-third of patients having a mild thrombocytopenia (100,000 to 150,000 per  $\text{mm}^3$ ) and one-tenth to one-quarter having platelet counts of less than 100,000 per  $\text{mm}^3$ .<sup>5,57</sup> Autoantibodies may be responsible for the thrombocytopenia seen in some lupus patients, but other mechanisms are also important; methods to evaluate anti-platelet antibodies in the clinical setting are technically difficult.

### Summary

Systemic lupus erythematosus is characterized by an enormous and increasing array of antibodies to cellular constituents. Autoantibodies can be subdivided by their immunologic antigen-binding specificity. Recent studies suggest that there is important clinical relevance to individual subsets and clusters of specific autoantibodies. It must be emphasized that these autoantibody phenomena are not diagnostic in themselves but must be interpreted within the context of the individual clinical situation.

### References

1. Tan EM, Cohen AS, Fries JF, Masi AT, McShane DJ, Rothfield NF, Schaller JG, Talal N, Winchester RJ. The 1982 revised criteria for the classification of systemic lupus erythematosus. *Arthritis Rheum* 1982; 25:1271.

2. Harley JB, Gaither KK. Autoantibodies. *Rheum Dis Clin North Am* 1988; 14:43.
3. Lee LA, Weston WL, Krugger GG, Emam M, Reichlin M, Stevens JO, Surbrugg SK, Vasil A, Norris DA. An animal model of antibody binding in cutaneous lupus. *Arthritis Rheum* 1986; 29:782.
4. Hargraves MM, Richmond H, Morton R. Presentation of two bone marrow elements: The "tart" cell and "L.E." cell. *Proc Staff Meet Mayo Clin* 1948; 23:25.
5. Bridman DR, Steinberg AD. Hematologic aspects of systemic lupus erythematosus. *Ann Intern Med* 1977; 86:220.
6. Tan EM. Systemic lupus erythematosus: Immunologic aspects. In: McCarty DJ, ed. *Arthritis and Allied Conditions: A Textbook of Rheumatology*, 11th edition. Philadelphia: Lea & Febiger. 1989; 1049.
7. Friou GJ. Clinical application of lupus serum-nucleoprotein reaction using fluorescent antibody techniques. *J Clin Invest* 1957; 36:890.
8. Holman HR, Kunkel HG. Affinity between the lupus erythematosus serum factor and cell nuclei and nucleoprotein. *Science* 1957; 126:162.
9. Lubinsecki AS, Dorsch CA. Comparison of mouse liver sections and cultured mouse fibroblasts as substrates for the detection of antinuclear antibodies. *Am J Clin Path* 1976; 66:892.
10. Synkowski DR, Mogavero HS, Provost TT. Lupus erythematosus laboratory testing and clinical subsets in the evaluation of patients. *Med Clin North Am* 1980; 64:921.
11. Reichlin M. Antinuclear antibodies. In: Kelley WN, Harris ED Jr., Ruddy S, Sledge CB, eds. *Textbook of Rheumatology*. 3rd edition. Philadelphia: WB Saunders Co. 1989; 208.
12. Maddison PJ, Provost TT, Reichlin M. ANA-negative systemic lupus erythematosus: Serologic analysis. *Medicine (Baltimore)* 1981; 60:87.
13. Ceppellini R, Polli E, Celada F. A DNA-reacting factor in serum of a patient with lupus erythematosus diffusum. *Proc Soc Exp Biol Med* 1957; 96:572.
14. Robbins WC, Holman HR, Deicher H, Kunkel HG. Complement fixation with cell nuclei and DNA in lupus erythematosus. *Proc Soc Exp Biol Med* 1957; 96:575.
15. Deicher HRG, Holman HR, Kunkel HG. The precipitin reaction between DNA and a serum factor in systemic lupus erythematosus. *J Exp Med* 1959; 109:97.
16. Chubick A, Sontheimer RD, Gilliam JN, Ziff M. An appraisal of tests for native DNA antibodies in connective tissue diseases: Clinical usefulness of *Crithidia luciliae* assay. *Ann Intern Med* 1978; 89:186.
17. Notman DD, Kurata N, Tan EM. Profiles of antinuclear antibodies in systemic rheumatic diseases. *Ann Intern Med* 1975; 83:464.
18. Eaton RB, Schneider G, Schur PH. Enzyme immunoassay for antibody to native DNA. *Arthritis Rheum*. 1983; 26:52.
19. Koffler D, Agnello V, Thoburn R, Kunkel HG. Systemic lupus erythematosus: Prototype of immune complex nephritis in man. *J Exp Med* 1971; 134:109.
20. Koffler D, Kunkel HG. Mechanisms of renal injury in systemic lupus erythematosus. *Am J Med* 1968; 45:165.
21. Winfield JB, Faerman I, Koffler D. Avidity of anti-DNA antibodies in serum and IgG glomerular eluates from patients with systemic lupus erythematosus. Association of high affinity anti-native DNA with glomerulonephritis. *J Clin Invest* 1977; 59:90.
22. Wilson MR, Tan EM. Antinuclear antibodies and the LE cell phenomenon. In: Cohen AS, Bennett JC, eds. *Rheumatology and Immunology*. 2nd edition. New York: Grune & Stratton, Inc. 1986.
23. Winn DM, Wolfe JF, Lindberg DA, Fristoe FA, Kingsland L, Sharp GC. Identification of a clinical subset of systemic lupus erythematosus by antibodies to the Sm antigen. *Arthritis Rheum* 1979; 22:1334.
24. Winfield JB, Brunner CM, Koffler D. Serologic studies in patients with systemic lupus erythematosus and central nervous system dysfunction. *Arthritis Rheum* 1978; 21:289.
25. Reichlin M, Mattioli M. Correlation of a precipitin reaction to an RNA protein antigen and a low prevalence of nephritis in

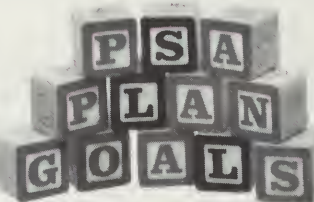


- patients with systemic lupus erythematosus. *N Engl J Med* 1972; 286:908.
26. Maddison PJ, Mogavero H, Reichlin M. Patterns of clinical disease associated with antibodies to nuclear ribonucleoprotein. *J Rheumatol* 1978; 5:407.
  27. Hochberg MC, Dorsch CA, Feinglass EJ, Stevens MB. Survivorship in systemic lupus erythematosus. Effect of antibody to extractable nuclear antigen. *Arthritis Rheum* 1981; 24:54.
  28. Gaudrean A, Amor B, Kahn MF, Ryckewaert A. Clinical significance of antibodies to soluble extractable nuclear antigen (anti-ENA). *Ann Rheum Dis* 1978; 37:321.
  29. Sharp GC, Irvin WS, Tan EM, Gould RG, Holman HR. Mixed connective tissue disease - an apparently distinct rheumatic disease syndrome associated with a specific antibody to extractable nuclear antigen (ENA). *Am J Med* 1972; 52:148.
  30. Nimelstein SH, Brody S, McShane D, Holman HR. Mixed connective tissue disease: A subsequent evaluation of the original 25 patients. *Medicine (Baltimore)* 1980; 59:239.
  31. Maddison PJ, Mogavero H, Provost TT, Reichlin M. The clinical significance of autoantibodies to a soluble cytoplasmic antigen in systemic lupus erythematosus and other connective tissue disease. *J Rheumatol* 1979; 6:189.
  32. Wasicek CA, Reichlin M. Clinical and serological differences between systemic lupus erythematosus patients with antibodies to Ro versus patients with antibodies to Ro and La. *J Clin Invest* 1982; 69:835.
  33. Sontheimer RD, Thomas JR, Gilliam JN. Subacute cutaneous lupus erythematosus: A cutaneous marker for a distinct lupus erythematosus subset. *Arch Dermatol* 1979; 115:1409.
  34. Sontheimer RD, Maddison PJ, Reichlin M, Jordan RE, Stastny P, Gilliam JN. Serologic and HLA associations in subacute cutaneous lupus erythematosus, a clinical subset of lupus erythematosus. *Ann Intern Med* 1982; 97:664.
  35. Provost TT, Arnett FC, Reichlin M. C2 deficiency, lupus erythematosus and anticytoplasmic Ro (SSA) antibodies. *Arthritis Rheum* 1983; 26:1279.
  36. Provost TT, Reichlin M. Immunopathologic studies of cutaneous lupus erythematosus. *J Clin Immunol* 1988; 8:223.
  37. Watson RM, Lane AT, Barnett NK, Bias WB, Arnett FC, Provost TT. Neonatal lupus erythematosus: A clinical, serological and immunogenetic study with review of the literature. *Medicine (Baltimore)* 1984; 63:362.
  38. Petri M, Watson R, Hochberg MC. Anti-Ro antibodies and neonatal lupus. *Rheum Dis Clin North Am* 1989; 15:335.
  39. Hogg GR. Congenital, acute lupus erythematosus associated with subendocardial fibroelastosis. *Am J Clin Path* 1957; 28:648.
  40. Litsey SE, Noonan JA, O'Connor WN, Cottrill CM, Mitchell B. Maternal connective tissue disease and congenital heart block: Demonstration of immunoglobulin cardiac tissue. *N Engl J Med* 1985; 312:98.
  41. Harley JB, Kaine JL, Fox OF, Reichlin M, Gruber B. Ro/SSA antigen and antibody in congenital complete heart block. *Arthritis Rheum* 1985; 28:1321.
  42. McCune AB, Weston WL, Lee LL. Maternal and fetal outcome in neonatal lupus erythematosus. *Ann Intern Med* 1987; 106:518.
  43. Lockshin MD, Gibofsky A, Peebles CL, Gigli I, Fotino M, Hurwitz S. Neonatal lupus erythematosus with heart block: Family study of a patient with anti-SSA and SSB antibodies. *Arthritis Rheum* 1983; 26:210.
  44. Alexander EL, Arnett FC, Provost TT, Stevens MB. Sjogren's syndrome: Association of anti-Ro (SSA) antibodies with vasculitis, hematologic abnormalities, and serologic hyperactivity. *Ann Intern Med* 1983; 98:155.
  45. Harley JB, Alexander EL, Bias WB, Fox OF, Provost TT, Reichlin M, Yamagata H, Arnett FC. Anti-Ro/SSA and La/SSB in Sjogren's syndrome. *Arthritis Rheum* 1986; 29:196.
  46. Fritzler MJ, Tan EM. Antibodies to histones in drug-induced and idiopathic lupus erythematosus. *J Clin Invest* 1978; 62:560.
  47. Hess EV. Drug-related lupus: The same or different? In: Lahita RG, ed. *Systemic Lupus Erythematosus*. New York: John Wiley & Sons. 1987; 869.
  48. Solinger AM. Drug-related lupus. Clinical and etiologic considerations. *Rheum Dis Clin North Am* 1988; 14:187.
  49. Harvey AM, Schulman LE. Connective tissue disease and the chronic biologic false-positive test for syphilis (BFP reaction). *Med Clin North Am* 1966; 50:1271.
  50. Mackworth-Young CG, Loizou S, Walport MJ. Primary antiphospholipid syndrome: Features of patients with raised cardiolipin antibodies and no other disorder. *Ann Rheum Dis* 1989; 48:363.
  51. Sammaritano LR, Gharavi AE, Lockshin MD. Antiphospholipid antibody syndrome: Immunologic and clinical aspects. *Semin Arthritis Rheum* 1990; 20:81.
  52. Conley CL, Hartman RC. A hemorrhagic disorder caused by circulating anticoagulant in patients with disseminated lupus erythematosus. *J Clin Invest* 1952; 31:621.
  53. Byron MA. The clotting defect in SLE. *Clin Rheum Dis* 1982; 8:137.
  54. Harris EN, Gharavi AE, Boey ML, Patel BM, Mackworth-Young CG, Loizou S, Hughes GRV. Anticardiolipin antibodies: Detection by radioimmunoassay and association with thrombosis in systemic lupus erythematosus. *Lancet* 1983; 2:1211.
  55. Harris EN. Antiphospholipid antibodies. *Br J Haematol* 1990; 74:1.
  56. Alarcon-Segovia DA. Pathogenetic potential of antiphospholipid antibodies. *J Rheumatol* 1988; 15:890.
  57. Laurence R, Nachman R. Hematologic aspects of systemic lupus erythematosus. In: Lahita RG, ed. *Systemic Lupus Erythematosus*. New York: John Wiley & Sons. 1987; 721.
  58. Winfield JB, Cohen PL, Litvin DA. Antibodies to activated T cells and their soluble products in systemic lupus erythematosus. *Arthritis Rheum* 1982; 25:814.

When it comes to building your financial future, you can't afford to settle for second best. That's why more and more of your colleagues are turning to PSA Financial Center for a full spectrum of financial, risk management, and investment counseling services designed expressly for the medical profession.

Our seven affiliate companies, both individually and as a team, have worked closely with over

## WE PUT IT ALL TOGETHER FOR YOU.



1,400 doctors, surgeons and support personnel to provide superior solutions to almost every kind of financial need and objective - regardless of its complexity.

The result is a level of experience, expertise, and proven performance that has made us a leader in all of our fields. Not to mention a powerful reason to give us a call today. At PSA, we put it all together for you. Let us show you exactly how.

PSA Professional Liability, Inc.  
Malpractice Insurance

PSA Financial, Inc.  
Employee Benefits

PSA Financial Advisors, Inc.  
Financial Planning



**PSA Financial Center**  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

PSA Capital Management, Inc.  
Investment Management

PSA Pension Services, Inc.  
Design & Administration

PSA Insurance, Inc.  
Agents & Brokers

PSA Equities, Inc.  
Broker / Dealer

**PLANNING FOR OUR CLIENTS FINANCIAL FUTURE**



---

# Variants/Subsets of SLE

---

Howard W. Hauptman MD

---

*Dr. Hauptman is Head, Division of Rheumatology, Department of Internal Medicine, Greater Baltimore Medical Center, Baltimore, MD.*

---

*Although systemic lupus erythematosus can be considered a single diagnostic entity, a number of clinical subsets have been described including late-onset lupus, drug-induced lupus, neonatal lupus, discoid lupus, and subacute cutaneous lupus.*

---

**T**he diagnosis of systemic lupus erythematosus (SLE) is based on a compilation of signs and symptoms, as well as a number of confirming laboratory tests. Lupus is commonly believed to be the prototypal autoimmune disorder with a generally poor course and eventual poor outcome. A common misconception is that all cases of SLE are similar. Although SLE can be considered a single diagnostic entity, a number of clinical subsets have been described. By classifying patients into one of these subsets, prognosis and future course of the disease can be assessed more accurately, resulting in a higher quality of care for these patients.

To understand the manner in which SLE is characterized and divided into its various subsets requires an understanding of its historical background. Descriptions of a number of chronic skin conditions from the ancient Greeks through the nineteenth century were eventually classified as lupus. However, in 1872, Moriz Kaposi proposed a new means of classification by dividing lupus into two types.<sup>1</sup> The first was limited to cutaneous manifestations and the second included a more systemic pattern of symptoms. Over the next century, a large amount of research was undertaken to better understand this systemic process. A number of large studies have described its features as those of a chronic multisystem disease with a variable course.<sup>2-5</sup> However, with newer technology in the laboratory and a better understanding of the clinical disease, a number of subsets can be found within this disorder. Although this may be an artificial means of classifying a series of clusters of patients, it has broader implications in our understanding of pathogenesis, clinical spectrum, and prognosis. These subsets include late-onset lupus, drug-induced lupus, neonatal lupus, discoid lupus, and subacute cutaneous lupus.

## Late-onset Lupus

Although SLE is thought of as a disease that predominantly affects women in the second to fifth decades of life, a number of large studies describe a subset presenting at a later age.<sup>5-9</sup> This

group of patients comprises 6 to 20 percent of the cases and is referred to as late-onset lupus.<sup>6,8,9</sup> These studies imply that this group of patients has a different clinical, serologic, and prognostic picture than that seen in younger patients.

Patients presenting after the age of fifty tend to have more subtle symptomatology. In one study, the average duration of symptoms prior to diagnosis was fifty months, while that of patients under twenty years of age was only fourteen months.<sup>6</sup> The presenting complaints, as well as organ involvement, were also less severe in the older patients. Prominent features of SLE observed in young individuals include skin rashes, arthritis, Raynaud's syndrome, and alopecia, as well as renal and nervous system involvement.<sup>6,9,10</sup> Although the data from collected studies of older patients have appeared heterogeneous, the features appear milder.<sup>6,7,9,10</sup> The most common manifestations included serositis, parenchymal lung involvement, and constitutional symptoms such as fatigue and weight loss. Also common, but at a much lower frequency when compared with the SLE population in general, were arthritis, rashes, and adenopathy. Obvious by their exclusion were features associated with more serious organ involvement such as significant kidney and central nervous system disease. A gender difference has been documented in this age group from the expected 9:1 female to male ratio to less than 3:1.<sup>11</sup> The diagnosis may be difficult because these patients may present with symptoms or signs of polymyalgia rheumatica or rheumatoid arthritis.<sup>7</sup> In a 1979 study reported by Baker, the initial diagnostic impression was incorrect in 55 percent of the patients.<sup>9</sup>

Serologic changes have also been observed in late-onset disease. Antinuclear antibodies are commonly found in most patients with SLE regardless of age.<sup>12</sup> However, high titer anti-deoxyribonucleic acid (DNA), anti-Sm antibodies, and hypocomplementemia are uncommon. This correlates with the clinical pattern of milder disease in this older age group.<sup>10,12,13</sup> Antibodies to Ro and La have been found in a strikingly higher frequency in this population, often at least twice that found in the younger age groups.<sup>7,13</sup> Human lymphocyte antigens (HLA) have also been studied in late-onset disease and an increased incidence of HLA-DR3 was observed. In younger patients, there is a higher concordance with HLA-DR2.<sup>8,14</sup> These results raise the possibility that many patients diagnosed with late-onset lupus may instead have another systemic condition such as Sjogren's syndrome.

The prognosis and outcome for patients diagnosed with SLE in later years is much better than that seen in the younger population.<sup>6,9,10</sup> This was supported by the study by Baker et al which showed a five-year survival rate of 92.3 percent and a nine-year survival rate of 83.1 percent.<sup>9</sup> Of the five deaths observed in this study, only one resulted from active SLE. Additionally, the use of corticosteroids should generally be minimized, with the

total dose much lower than in the general lupus population.<sup>6,9,10</sup> This is important in the approach to the elderly population with lupus, since in this population, the drug has added hazards.

### Drug-induced Lupus

Despite the vast number of studies of SLE, no specific etiologic agent has been identified. However, in a small subset of SLE patients, certain chemicals, environmental agents, or drugs have been implicated in the onset of disease symptoms. Clinically, this can vary from abnormal laboratory results, including serologic changes, to the onset of a multisystem disease. Studies have demonstrated two possible interactions between drugs and clinical disease. Occasionally in patients with established SLE, certain drugs, such as sulfonamides and hormone supplements, have been implicated as the cause of an exacerbation of the disease.<sup>15-17</sup> Other drugs, when used over a prolonged period of time, can actually result in lupus-like symptoms. Upon discontinuation of the inciting agent, the patient becomes asymptomatic.<sup>18-21</sup>

The first report of a drug association with SLE appeared in 1945 with the description of a lupus-like illness associated with the antibiotic sulfadiazine.<sup>22</sup> On review, this description departs from drug-induced lupus as we now consider it. In the 1950s, hydralazine was also described as causing lupus-like symptoms, and in the 1960s, procainamide was added to this list.<sup>18,19</sup> With its frequent use in cardiac arrhythmias, procainamide soon became the most commonly associated agent in drug-induced lupus. Over the next decade, isoniazid,<sup>20</sup> a number of anticonvulsants,<sup>21</sup> and psychotropic drugs also were shown to cause lupus-like syndromes.<sup>23</sup> Since that time, several dozen other drugs have been linked to lupus-like illnesses. Doubts exist, however, concerning this latter group's true association with the disease, since most of these reports have been anecdotal and sporadic.<sup>24</sup> As a whole, the commonly implicated drugs are classified into a small number of therapeutic categories: antihypertensives, antiarrhythmics, anticonvulsants, estrogen-containing compounds, and sulfonamide derivatives.<sup>25</sup> Lastly, a number of chemical compounds have been linked with the onset of disease symptomatology. Hydrazines are the most common and are found in a number of drugs as well as environmental substances, including mushrooms, tobacco, and products used in industry, medicine, and agriculture.

Several populations are at risk for developing drug-related lupus. In the pediatric age group, this syndrome is seen with the use of anticonvulsants.<sup>23</sup> In the elderly, antihypertensives and drugs used in the treatment of heart disease are frequently implicated. In contrast to the marked female predominance in idiopathic lupus, the male/female ratio becomes fairly equal in drug-induced lupus. For reasons not well understood, this syndrome is also relatively uncommon in blacks. Data concerning incidence are lacking.



Although the exact presentation and course may vary slightly depending on the drug being used, the clinical manifestations of drug-induced lupus appear to be somewhat milder than those seen in idiopathic disease (Table). Symptoms at onset can be insidious or abrupt. Most of the patients fulfill the revised American Rheumatism Association (ARA) criteria for systemic lupus.<sup>26</sup> Constitutional features including fevers, malaise, and weight loss are very common. Other common manifestations include serositis (pleuritis and pericarditis) and joint involvement. Rarely are the more serious manifestations of idiopathic lupus seen, such as significant central nervous system or renal disease. Skin rashes and actual joint deformities are also often lacking.<sup>27</sup> In fact, if significant multisystem disease is seen in patients receiving one of these drugs, the diagnosis of idiopathic lupus or another disease should be considered. Most patients who develop drug-induced lupus have been receiving the drug for a prolonged period prior to disease manifestations. However, cases have been described as early as one month after initial use of the drug. Usually, resolution of the clinical course follows closely after discontinuation of the inciting drug, although in rare cases symptoms may persist for months.<sup>28</sup>

A prompt diagnosis is essential to insure a good outcome. This requires a high index of suspicion when evaluating patients in the appropriate population. Difficulty in recognition may be a result of the increasing number of new drugs being produced and the lack of data concerning their potential risk for inducing a lupus-like syndrome. The physician must be cognizant of this at all times since early manifestations are often subtle and nonspecific. When the diagnosis is suspected, the inciting drug should be immediately stopped if possible. For symptomatic relief, non-steroidal anti-inflammatory drugs are often helpful; however, there does not appear to be any role for the use of high dose corticosteroids or antimalarials. Within the first weeks, most symptoms will have subsided without any specific drug treatment.

Treating patients with idiopathic lupus may present an occasional dilemma for the physician. Will the use of one of these drugs place the patient at increased risk of exacerbating his or her underlying disease? An example of this is the use of anticonvulsants in a patient with central nervous system involvement. Experience has shown that these patients are not at significant risk of worsening their disease course by initiating these drugs, although close monitoring is imperative to avoid potential complications.

A number of the drugs associated with drug-induced lupus have been shown to cause laboratory abnormalities in patients who have not demonstrated any clinical manifestations of a lupus-like syndrome. After one year, 30 percent of patients taking hydralazine, and 50 to 100 percent of patients taking procainamide, will develop a positive antinuclear antibody (ANA).<sup>29,30</sup> However, the majority of these patients will not show any evidence of active disease. Therefore, an isolated laboratory abnormality in an asymptomatic patient should not cause any modification in the treatment regimen. In patients with clinical drug-induced lupus, however, a number of laboratory abnormalities are often seen. By definition, all patients must have a positive ANA. These antibodies are often directed against nuclear histones and, therefore, will have a homogeneous fluorescent pattern and a positive antihistone antibody. Lupus erythematosus (LE) cells are seen in up to 75 percent of patients. The sedimentation rate is often elevated in the moderate to high range. Other laboratory abnormalities seen include positive rheumatoid factors, leukopenia, Coombs' positivity, and anti-single-stranded (ss)DNA. Lacking in most cases, are low complement levels, anti-double-stranded (ds)DNA, and anti-Sm antibodies, which are characteristic of many patients with idiopathic lupus.

The exact mechanism of drug-induced lupus remains unknown. Several drugs such as procainamide, hydralazine, and isoniazid are metabolized in the liver by acetylation. It is believed that factors that increase the risk of developing lupus include the amount of drug prescribed and the rate of acetylation. It appears that either the drug procainamide or a non-acetylated metabolite is responsible for the induction of the syndrome. Slow acetylators accumulate these drugs and are at higher risk of developing symptoms than fast acetylators.<sup>31</sup> Approximately 50 percent of the population in the United States consists of slow acetylators.<sup>32</sup> The acetylated metabolite, N-acetyl procainamide, rarely causes ANA-positivity or active clinical disease.<sup>33</sup> Patients who develop lupus symptoms while taking procainamide can generally take this metabolite without any further difficulty.

Immunologic mechanisms explaining the drug-induced lupus syndrome remain speculative. However, several mechanisms have been postulated. In the cross-reactivity model, the similarity of the molecular structure between certain drugs and purine bases of DNA

**Table. Drug-induced v Idiopathic Lupus**

Features	Drug-induced Lupus	Idiopathic SLE
<b>Demographic</b>		
Age (yrs.)	older	20-40
Sex (F:M)	equal	9:1
<b>Clinical</b>		
Constitutional	50-74 percent	≥ 75 percent
Articular	≥ 75 percent	≥ 75 percent
Serositis	25-49 percent	50-74 percent
Skin rash	<25 percent	≥ 75 percent
Renal	0	50-74 percent
Central nervous system	0	25-49 percent
<b>Immunologic</b>		
Antinuclear antibody	100%	≥ 75 percent
Anti-nRNP	< 25 percent	< 25 percent
Anti-Sm	0	25-49 percent
Anti-nDNA	0	25-49 percent
Anti-histone	≥ 75 percent	< 25 percent
Complement	Normal	Reduced



can cause the production of antibodies to DNA.<sup>34</sup> Another model is based on the observation that a number of drugs can interact with nuclear antigens by binding to nucleoproteins or DNA. Hydralazine, procainamide, and isoniazid have demonstrated this ability in a number of *in vitro* studies.<sup>35-37</sup> This binding can alter the nucleic acid's determinants, thus converting its usually poor immunogenicity to a stronger immunogenic compound. Another mechanism is based on the effects that many of these drugs have on T-lymphocytes, either directly or indirectly. Procainamide has been shown to effect both T-helper as well as suppressor populations.<sup>38,39</sup> Both hydralazine and procainamide have elicited anti-lymphocyte antibodies impairing lymphocyte function.<sup>40,41</sup> Unfortunately, no single mechanism has been consistently linked to this disorder at the present time.

Some researchers believe that a genetic component may be required to explain some of these mechanisms.<sup>42</sup> HLA-DR4 has been correlated with hydralazine-induced lupus, which differs from the association of HLA-DR2 and DR3 with idiopathic disease.<sup>42</sup> However, present data remain inconclusive.

### Neonatal Lupus

Neonatal lupus was first described in 1954 in an infant born with erythematous macules across the face and scalp which disappeared by three months of age.<sup>43</sup> Since that time, more than 100 cases have been described in the literature. Although this number appears small, the incidence is thought to be underestimated. Besides skin involvement, studies have associated the presence of a congenital heart block and the universal finding of autoantibodies with this syndrome.<sup>44,45</sup> Since immunoglobulin G (IgG) can cross the placental membrane, maternal autoantibodies such as ANA, anti-Ro(SSA), anti-La(SSB), and antibodies that bind to specific hematopoietic cells are found in the newborn of mothers with SLE or with anti-Ro(SSA) antibody positivity.<sup>46</sup> Except for infants with anti-Ro(SSA), there are no clinical manifestations associated with these antibodies and they will disappear in the first few months of life.

The skin manifestations typically begin soon after birth and present as a photosensitive rash which may be scaly, erythematous, and maculopapular and which, in some, may be similar to the subacute cutaneous lupus seen in adults. These changes often begin in the periorbital area and then spread to include any sun-exposed region. The histologic changes are similar to those seen in discoid lupus with follicular plugging, hyperkeratosis, epidermal atrophy, and mononuclear cell infiltration. On immunofluorescence, immunoglobulin and complement complexes may be found at the dermoepidermal junction.<sup>47</sup> Generally, skin manifestations clear by six to twelve months of age. In most cases, no residua is found but occasionally mild scarring, skin atrophy, and depigmentation can be seen.<sup>46</sup> While the

skin lesions remain present, Ro or La antibodies are found, but with fading, these will decrease. The differential diagnosis includes eczema, psoriasis, seborrhea, superficial fungal infections, and erythema multiforme.<sup>48</sup> Management consists of observation, sun avoidance, and the occasional use of topical steroids; however, topical steroids may contribute to skin atrophy and are best avoided.

The first report of congenital complete heart block was in 1901.<sup>49</sup> It was not until 1945 that this was described in an infant of a mother with SLE.<sup>50</sup> However, these were not associated until several reports appeared in the 1970s. It was postulated that a plasma factor transferred across the placenta may be responsible for the changes seen in the infant.<sup>51-53</sup> In 1981, the placental transfer of anti-Ro antibodies was documented,<sup>54</sup> followed by its association with congenital heart block.<sup>55</sup> The Ro(SSA) antigen is a small cytoplasmic ribonucleoprotein distinct from the Sm, RNP, and La(SSB) antigens. The antibodies to Ro are found in approximately 25 to 40 percent of all lupus patients,<sup>56</sup> 1 percent of the general population,<sup>57</sup> and 84 percent of mothers of infants with congenital heart block. Mothers of infants born with congenital complete heart block were often asymptomatic for connective tissue diseases but these antibodies generally were present in both mother and infant. Over time, as expected, one may see the disappearance of the antibodies in the offspring although the heart block is permanent.<sup>46,57</sup> Mothers of infants born with heart block are thought to have a 30 to 60 percent chance of having or developing a connective tissue disease. Additionally, there is a 5 percent mortality in children with congenital heart block without associated maternal SLE compared with a 20 to 30 percent mortality in those with maternal SLE.<sup>58</sup> The condition manifests itself clinically as a sudden onset of bradycardia in utero, followed by congestive heart failure.

The histological changes seen within the infant myocardium in those with congenital heart block include endocardial fibroelastosis, irreversible calcification and degeneration of the atrioventricular conduction system.<sup>51,59</sup> The presence of Ro antigen has been found in fetal myocardium as early as the sixteenth week of gestation. Antibodies to Ro have also been found deposited in the interstitium and endocardium of an infant with congenital heart block.<sup>60</sup>

The third clinical manifestation seen in children with the neonatal lupus syndrome involves hematologic abnormalities. These include Coombs'-positive hemolytic anemia, leukopenia, and thrombocytopenia.<sup>61</sup> These are generally seen at birth or in the first few weeks of life and resolve within two months. It is thought that these result from the passage across the placenta of maternal antibodies to these specific cells. Since clinical manifestations are mild, no treatment is generally necessary. Steroids are occasionally used and have proven to be effective. Blood transfusions are rarely required. Mis-



ellaneous clinical findings associated with neonatal lupus include hepatosplenomegaly, lymphadenopathy, and pneumonitis. These findings are also transient, as seen in all the other manifestations of this disorder.

Issues concerning neonatal lupus syndrome need to be addressed when discussing family planning with lupus patients. There are tests available to screen for this disorder and modalities available to improve survival in infants at risk. The risk for a mother with SLE of having a baby with congenital heart block is approximately one in sixty pregnancies, but the risk increases to one in twenty in the presence of anti-Ro(SSA) antibodies.<sup>62</sup> Other causes of fetal loss such as spontaneous abortions are not seen.<sup>62</sup> All mothers with SLE should be screened for anti-Ro(SSA) antibodies to determine the potential risk for neonatal lupus syndrome. If the titer for this antibody is significantly elevated, abdominal ultrasound, fetal nonstress tests, and fetal echocardiography should be performed. Even in the presence of the anti-Ro antibody, the risk of developing manifestations of this syndrome remains small. Therefore, the clinical approach in this situation should be close monitoring to determine the need for a premature delivery. After delivery, a pediatric cardiologist should assess the infant to determine the need for a pacemaker. Cardiac monitoring for congestive heart failure should be maintained. Thereafter, cardiac status should be followed for the first few months to observe for late complications. The actual risk of developing manifestations of adult SLE, although never calculated, appears to be small.

### Cutaneous Subsets of Lupus

Although there are many manifestations of SLE that are characterized by skin involvement, only two major cutaneous subsets are found which are often distinguished from the systemic form of the disease. Descriptions of the discoid variant preceded the first descriptions of systemic disease by several centuries. It was only in the 1970s, however, that subacute cutaneous lupus erythematosus (SCLE) was appreciated.

Discoid lupus erythematosus (DLE) is thought to be on the benign end of the broad spectrum of disease known as systemic lupus erythematosus.<sup>63</sup> Manifestations are generally limited to the skin and lack associated systemic symptomatology. Onset can occur at any age but most commonly presents between the ages of twenty and forty years. Although the lesions can be disseminated, the majority of patients have lesions limited to the head, neck, and scalp. Progression of the rash by sun exposure can be seen in up to 50 percent of DLE patients.<sup>64</sup> Of the few patients who go on to develop significant laboratory abnormalities or develop manifestations of systemic disease, the majority will have diffuse skin involvement.<sup>65</sup> Mucous membrane involvement is also seen, usually coexisting with the skin disease.

Clinically, the skin lesions of DLE are characteristic.<sup>63</sup> They begin as erythematous patches and can become scaly and plaque-like in appearance. The lesions will often enlarge and may coalesce. Over time, other changes can occur including the development of telangiectasias, central atrophy with hypopigmentation, and hyperpigmentation at the active borders. Follicular openings may become dilated and will often become plugged with epithelial debris. Some of the patches resolve but most of the lesions heal with residual scarring and areas of atrophy. A patchy irreversible alopecia occurs when the scalp is actively involved due to follicular destruction.

Several histologic changes are commonly seen in the lesions of DLE.<sup>65</sup> On the skin surface, there is hyperkeratosis and follicular plugging. Within the basal layer of the epidermis, there is disorganization of basal cells, edema, and mononuclear cell infiltration along the dermal-epidermal junction. Immunoglobulin and complement components have also been found along this junction and it is thought to be the principal site of injury. In the dermal area, a mononuclear cell infiltrate is commonly seen, but its depth and distribution may vary.

Patients with discoid skin lesions alone rarely have significant laboratory abnormalities.<sup>66</sup> Antinuclear antibodies can be detected in up to 30 percent of these patients but in only 5 percent are titers significantly elevated. Rarely are other immunological abnormalities recognized, such as false positive tests for syphilis, leukopenia, low complement levels, increased globulins, and the presence of rheumatoid factors. If other laboratory abnormalities are observed in a patient with DLE, one should be aware of the possible risk for developing systemic disease. The actual risk of DLE progressing to SLE in patients who are asymptomatic for systemic disease is in the 5 to 10 percent range.<sup>67</sup> In this situation, the systemic disease manifestations are relatively mild. When patients presenting with systemic disease were examined, approximately 10 to 15 percent exhibited features of discoid lesions.<sup>68</sup>

Treatment of patients with DLE is based on the assumption that any evidence of systemic signs or symptoms has been aggressively pursued to exclude the diagnosis of SLE.<sup>63</sup> These patients should have a thorough initial examination with extensive laboratory testing. Although many patients may not demonstrate obvious photosensitivity, measures should still be taken to avoid sunlight when possible. The use of wide-brimmed hats and long sleeves, and the use of one of the more potent sunscreens are recommended. The discoid lesions can be treated with topical steroid creams or steroid preparations can be injected directly into the lesions. If these prove ineffective or the distribution of lesions are too widespread, short courses of oral steroids can be administered. In many such instances, especially if photosensitivity is observed, antimalarials may be effective.<sup>63</sup> One should be aware that these drugs will often require four to eight weeks of

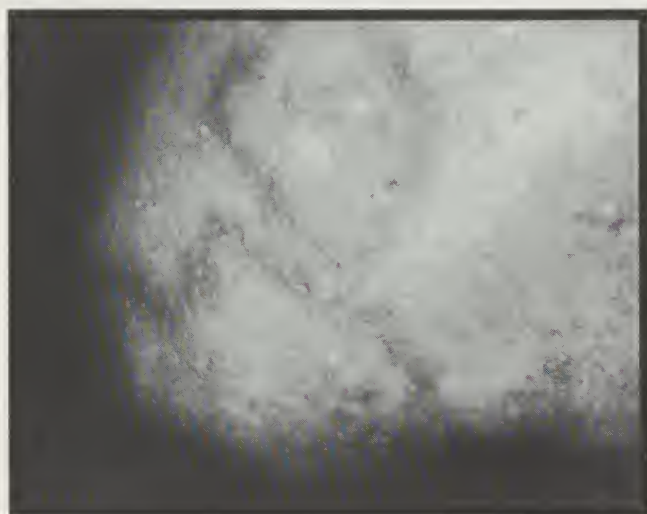


therapy before a clear-cut clinical benefit is observed. The greatest potential toxicity is retinal damage. However, the risk of this is extremely low when using the recommended dosages and when these patients are closely monitored with regular ophthalmologic examinations (Figures 1 and 2).

The second cutaneous subset of SLE is subacute cutaneous lupus erythematosus (SCLE). The clinical features of this disorder differ from those of discoid



**Figure 1.** Scarring, alopecia, and atrophy in a patient with discoid lesions. (From the Slide Atlas of Rheumatology, Gower Medical Publishing, Ltd., New York.)



**Figure 2.** Nonscarring annular plaques seen in SCLE. (From the collection of Lisa Beck MD, Chief of Dermatology, Francis Scott Key Medical Center, Baltimore, MD.)

lupus in a number of ways. This difference was first recognized in a group of patients who had a distinctive nonscarring skin lesion associated with marked photosensitivity.<sup>69</sup> The primary lesion may begin as a small erythematous plaque or papule which will often expand and eventually merge with other lesions. These lesions are annular, papulosquamous, or psoriasiform in appearance and often become widespread, especially in sun-exposed regions. Photosensitivity plays a more important role in SCLE than in DLE. With resolution, the classic changes of scarring and atrophy seen in DLE are not found.

Often mild systemic disease manifestations are observed in SCLE.<sup>70</sup> The most commonly seen symptoms include arthralgias or arthritis, myalgias, fevers, and malaise. Significant renal and central nervous system involvement are unusual. Serologically, most patients have circulating antibodies to the Ro(SSA) antigen and, less commonly, to La(SSB).<sup>69</sup> Approximately 63 percent of SCLE patients will have a positive ANA test. This compares with 4 percent of asymptomatic DLE patients, and 90 percent of SLE patients. Other laboratory abnormalities seen in this subset of patients include leukopenia (19 percent), low complement studies (22 percent), and anti-DNA antibodies (37 percent).

Histologically, the skin lesions have many of the changes seen in other forms of cutaneous lupus. There is less follicular plugging and hyperkeratosis than seen in DLE lesions. Immune deposits at the dermoepidermal junction of involved lesions are seen in less than 50 percent of biopsies, compared with approximately 90 percent of DLE lesions.<sup>71</sup>

Management of SCLE is very similar to that of DLE. Because of the marked photosensitivity, aggressive avoidance of the sun is most important. The same therapeutic modalities used in DLE are employed in SCLE, including topical and systemic steroids, as well as anti-malarials. These regimens are less effective, however. If systemic manifestations become prominent, treatment regimens should be modified accordingly.<sup>72</sup>

## Conclusion

Systemic lupus erythematosus is commonly recognized as a single homogeneous disorder. However, better understanding of its subsets allows for improved management of these patients. The recognition of late-onset and drug-induced lupus requires a high index of suspicion since features may be subtle and nonspecific. Early diagnosis will allow prompt therapeutic intervention. Delays, however, may markedly alter the patient's quality of life. Recognition of the individual subsets of cutaneous disease and their differentiation from SLE should influence the physician's approach to these patients. Since the disease is milder and more limited, treatment regimens can be modified accordingly. Educating patients of this fact allows for less anxiety on their part and, subsequently, a better lifestyle.



## References

- Kaposi MK. Neue Beitrage zur Kenntniss des Lupus erythematosus. *Arch Dermatol Syph* 1872; 4:36.
- Harvey AM, Shulman LE, Tumulty PA et al. Systemic erythematosus: Review of the literature and clinical analysis of 138 cases. *Medicine* 1954; 33:291.
- Dubois EL, Tuffanelli DL. Clinical manifestations of systemic lupus erythematosus: Computer analysis of 520 cases. *JAMA* 1964; 190:104.
- Ropes MW. *Systemic Lupus Erythematosus*. Cambridge: Harvard University Press. 1976.
- Estes D, Christian CL. The natural history of systemic lupus erythematosus by prospective analysis. *Medicine* 1971; 50:85.
- Urowitz MB, Stevens MB, Shulman LE. The influence of age on the clinical pattern of systemic lupus erythematosus. *Arthritis Rheum* 1967; 10:319.
- Foad BSI, Sheon RP, Kirsner AB. Systemic lupus erythematosus in the elderly. *Arch Intern Med* 1972; 130:743.
- Hochberg MC, Boyd RE, Ahearn JM et al. Systemic lupus erythematosus: A review of clinico-laboratory features and immunogenetic markers in 150 patients with emphasis on demographic subsets. *Medicine* 1985; 64:285.
- Baker SB, Rovira JR, Campion EW, Mils JA. Late onset systemic lupus erythematosus. *Am J Med* 1979; 66:727.
- Wilson HA, Hamilton ME, Spyker DA et al. Age influences the clinical and serologic expression of systemic lupus erythematosus. *Arthritis Rheum* 1981; 24:1230.
- Ballou SP, Kahn MA, Kushner I. Clinical features of systemic lupus erythematosus. Differences related to race and age of onset. *Arthritis Rheum* 1982; 25:55.
- Wysenbeek AJ, Mandel D, Mayes M, Clough J. Autoantibodies in systemic lupus erythematosus of late onset. *Cleve Clin Quart* 1985; 52:119.
- Catoggio LJ, Skinner RP, Smith G et al. Systemic lupus erythematosus in the elderly: Clinical and serological characteristics. *J Rheumatol* 1984; 11:175.
- Bell DA, Rigby R, Stiller CR et al. HLA antigens in systemic lupus erythematosus: Relationship to disease severity, age at onset, and sex. *J Rheumatol* 1984; 11:475.
- Gold S. Role of sulfonamides and penicillin in pathogenesis of systemic lupus erythematosus. *Lancet* 1951; 1:268.
- Gold S, Gowing NFC. Systemic lupus erythematosus: A clinical and pathological study. *Q J Med* 1953; 2:457.
- Bole GG Jr., Friedlander MH, Smith, CK. Rheumatic symptoms and serological abnormalities induced by oral contraceptives. *Lancet* 1969; 1:323.
- Perry HM, Schroeder HA. Syndrome simulating collagen disease caused by hydralazine. *JAMA* 1954; 154:670.
- Ladd AT. Procainamide-induced lupus erythematosus. *N Engl J Med* 1962; 267:1357.
- Cannat A, Seligmann M. Possible induction of antinuclear antibodies by isoniazid. *Lancet* 1966; 1:185.
- Fabius AJM, Gaulhafer WK. Systemic lupus erythematosus induced by psychotropic drugs. *Acta Rheumatol Scand* 1871; 17:137.
- Hoffman BJ. Sensitivity of sulfadiazine resembling acute disseminated lupus erythematosus. *Arch Dermatol Syph* 1945; 53:190.
- Singsen BM, Fishman L, Hanson V. Antinuclear antibodies and lupus-like syndromes in children receiving anticonvulsants. *Pediatrics* 1976; 57:529.
- Hess EV. Introduction to drug-related lupus. *Arthritis Rheum* 1981; 24:vi.
- Solinger AM. Drug-related lupus: Clinical and etiologic considerations. *Rheum Dis Clin North Am* 1988; 14(1).
- Tan EM, Cohen AS, Fries JF et al. The 1982 revised criteria for the classification of systemic lupus erythematosus. *Arthritis Rheum* 1982; 25:1271.
- Hess EV. Drug-related lupus: The same or different? In Lahita RG, ed. *Systemic Lupus Erythematosus*. New York: John Wiley & Sons. 1987; 869-80.
- Hildreth EA, Biro CE, McCreary TA. Persistence of the hydralazine syndrome. *JAMA* 1960; 173:657.
- Condemi JJ, Moore-Joines D, Vaughn JH et al. Antinuclear antibodies following hydralazine toxicity. *N Engl J Med* 1967; 167:486.
- Blomgren SE, Condemi JJ, Bignall MC et al. Antinuclear antibody induced by procainamide; A prospective study. *N Engl J Med* 1969; 281:64.
- Woosley RL, Drayer DE, Reidenberg MM et al. Effect of acetylator phenotype on the rate at which procainamide induces antinuclear antibodies and the lupus syndrome. *Ann Intern Med* 1981; 95:18.
- Vessell ES. Pharmacogenetics: Multiple interactors between genes and environment and determinants of drug response. *Am J Med* 1979; 66:183.
- Kluger J, Drayer DE, Reidenberg MM, Lahita R. Acetyl-procainamide therapy in patients with previous procainamide-induced lupus syndrome. *Ann Intern Med* 1981; 95:18.
- Yamauch Y, Litwin A, Adams L et al. Induction of antibodies to nuclear antigens in rabbits by immunization with hydralazine-human serum albumin conjugates. *J Clin Invest* 1975; 56:958.
- Dubroff LM, Reid RJ. Hydralazine-pyrimidine interactions may explain hydralazine-induced lupus erythematosus. *Science* 1980; 208:404.
- Eldredge NT, Roberts WV, Miller JJ. The interaction of lupus-inducing drugs with deoxyribonucleic acid. *Clin Immunol Immunopathol* 1974; 3:263.
- Alarcon-Segovia D, Fishbein E, Bentacourty VM. Antibodies to nucleoprotein in tuberculous patients receiving isoniazid. *Clin Exp Immunol* 1969; 5:429.
- Ochi T, Goldings EA, Lipsky PE, Ziff M. Immunomodulatory effect of procainamide in man. *J Clin Invest* 1983; 71:36.
- Miller KB, Salem D. Immune regulatory abnormalities produced by procainamide. *Am J Med* 1982; 73:487.
- Ryan PFJ, Hughes GRV, Bernstein R, Mansilla R, Pollery CT. Lymphocytic toxic antibodies in hydralazine-induced lupus erythematosus. *Lancet* 1979; ii:1248.
- Bluestein HG, Zvaifler NJ, Weissmann MH, Shapiro RF. Lymphocyte alteration by procainamide: Relation to drug-induced lupus erythematosus syndrome. *Lancet* 1979; ii:816.
- Batchelor JR, Welsh KI, Mansilla-Tinoco R et al. Hydralazine-induced systemic lupus erythematosus: Influence of HLA DR and sex on susceptibility. *Lancet* 1980; ii:1107.
- McCuistion CH, Schoch EP. Possible discoid lupus erythematosus in newborn infant. *Arch Dermatol Syph* 1954; 70:782.
- Scott JS, Maddison PJ, Taylor PV et al. Connective tissue disease. Antibodies to ribonuclear protein and congenital heart block. *N Engl J Med* 1983; 309:209.
- Reed DR, Lee LA, Harmon C et al. Autoantibodies to SSA-Ro in infants with congenital heart block. *J Pediatr* 1983; 103:889.
- Watson RM, Lane AT, Barnett NK et al. Neonatal lupus erythematosus: A clinical, serological, and immunogenetic study with review of the literature. *Medicine* 1984; 63:362.
- Lane AT, Watson RM. Neonatal lupus erythematosus. *Am J Dis Child* 1984; 138:663.
- Olsen NY, Lindsley CB. Neonatal lupus syndrome. *AM J Dis Child* 1987; 141.
- Morquio L. Sur une maladie infantile et familiere caracterisee par des modifications permanentes du pouls, des attaques syncopales et epilephormes, et al mort subite. *Arch Med Enfants* 1901; 4:467.
- Plant RK, Steven RA. Complete A-V block in a fetus: A case report. *Am Heart J* 1945; 30:615.
- Chameides L, Truex RC, Vetter V et al. Association of maternal systemic lupus erythematosus and congenital heart block. *N Engl J Med* 1977; 297:1204.
- McCue CM, Mantakas ME, Tingelstad JB, Ruddy S. Congenital heart block in newborns of mothers with connective tissue disease. *Circulation* 1977; 56:82.
- Hardy JD, Solomon S, Banwell GS et al. Congenital complete heart block in the newborn associated with maternal systemic lupus erythematosus and other connective tissue disorders. *Arch Dis Child* 1979; 54:7.
- Kephart DC, Hood AF, Provost T. Neonatal lupus

erythematosus: New serological findings. *J Invest Dermatol* 1981; 77:331.

55. Franco AE, Weston WL, Peebles C, Forstat SL, Phanuphat P. Autoantibodies directed against sicca syndromes in neonatal lupus syndrome. *J Am Acad Dermatol* 1981; 4:67.
56. Maddison P, Mogavero H, Provost TT et al. The clinical significance of autoantibodies to a soluble cytoplasmic antigen in systemic lupus erythematosus and other connective tissue disorders. *J Rheumatol* 1979; 6:189.
57. Fritzler MJ, Pauls JD, Kinsella TD et al. Antinuclear, anticytoplasmic, and anti-Sjogren's syndrome antigen A (SS-A/Ro) antibodies in female blood donors. *Clin Immunol Immunopathol* 1985; 6:120.
58. Scott JS, Maddison PJ, Taylor PV et al. Connective tissue disease, antibodies to ribonucleoprotein, and congenital heart block. *N Engl J Med* 1983; 309:209.
59. Hull D, Binns BAO, Joyce D. Congenital heart block and widespread fibrosis due to maternal lupus erythematosus. *Arch Dis Child* 1966; 41:688.
60. Litsey SE, Noonan JA, O'Connor WN et al. Maternal connective tissue disease and congenital heart block. *N Engl J Med* 1985; 312:98.
61. Seip M. Systemic lupus erythematosus in pregnancy with haemolytic anemia, leukopenia, and thrombocytopenia in the mother and her newborn infant. *Arch Dis Child* 1960; 35:364.
62. Kamsey-Goldman R, Hom D, Deng J et al. Anti-SSA antibodies and fetal outcome in maternal systemic lupus erythematosus. *Arthritis Rheum* 1986; 29:1269.
63. Gilliam JN. Systemic lupus erythematosus and the skin. In: Lahita RG, ed. *Systemic Lupus Erythematosus*. New York: Wiley and Sons 1987; 615-42.
64. Rothfield NF, March CH, Miescher P et al. Chronic discoid lupus erythematosus: A study of 65 patients and 65 controls. *N Engl J Med* 1963; 269:1155.
65. Callen JP. Systemic lupus erythematosus in patients with cutaneous lupus erythematosus. *J Am Acad Dermatol* 1985; 12:278.
66. Prystowsky SD, Herndon JH, Gilliam JN. Chronic cutaneous lupus erythematosus (DLE): A clinical and laboratory investigation of 80 patients. *Medicine* 1976; 55:183.
67. Millard LG, Rowell NR. Abnormal laboratory test results and their relationship to prognosis in discoid lupus erythematosus. A long term follow-up study of 92 patients. *Arch Dermatol* 1979; 115:1055.
68. Tuffanelli DL, Dubois EL. Cutaneous manifestations of systemic lupus erythematosus. *Arch Dermatol* 1964; 90:377.
69. Sontheimer RD, Thomas JR, Gilliam JN. Subacute cutaneous lupus erythematosus: A cutaneous marker for a distinct lupus erythematosus subset. *Arch Dermatol* 1979; 115:1409.
70. Callen JP, Kulichik B, Stelzer G et al. Subacute cutaneous lupus erythematosus: Clinical, serologic, and immunogenetic studies on 49 patients seen in a non-referral setting. *J Am Acad Dermatol* 1986; 15:1227.
71. Gilliam JN, Sontheimer RD. Subacute cutaneous lupus erythematosus. *Clin Rheum Dis* 1982; 8:343.
72. Schur PH. Clinical features of SLE. In: Kelley, Harris, Ruddy, Sledge, eds. *Textbook of Rheumatology*. Philadelphia: W.B. Saunders Co. 1989. ■

# A 194TH ANNUAL MEETING

Medical  
&  
Chirurgical  
Faculty  
of  
Maryland

**Thursday, Friday and Saturday  
April 30, May 1 and May 2, 1992**

at the  
**Omni Inner Harbor Hotel  
Baltimore, MD**

For more information call  
(301) 539-0872 or (800) 492-1046 IN MD.  
For Hotel Reservations call (301) 752-1100.

**Mark Your Calendar!**

*Meeting & Entertainment Rooms*

**The perfect setting  
for parties or  
parliamentary procedures.**

Located across the street from the Meyerhoff  
and a block from the Lyric.

Med Chi has space to accommodate your  
next social or business group  
gathering.

Contact Convention Services at 301-539-0872  
or at 1-800-492-1056 toll free in Maryland  
for information.





---

# Management of the Pregnant Lupus Patient

---

John T. Repke MD and Michelle Petri MD, MPH

---

*Dr. Repke is Associate Professor, Department of Gynecology and Obstetrics, The Johns Hopkins University School of Medicine, and Co-Director of the Lupus Pregnancy Center, The Johns Hopkins Hospital. Dr. Petri is Assistant Professor, Division of Molecular & Clinical Rheumatology, Department of Medicine, The Johns Hopkins University School of Medicine, Co-Director of the Lupus Pregnancy Center, The Johns Hopkins Hospital, and recipient of the Clinical Associate Physician award, OCRC # RR00722.*

---

*Increased understanding of SLE as it relates to pregnancy has allowed for many women with lupus today to have a successful pregnancy. However, pregnancies are high risk with up to 25 percent ending in miscarriage and with a high frequency of preterm delivery.*

---

Pregnancy complicated by any medical illness can present a challenge to both internists and obstetricians. The challenge of lupus pregnancy is particularly striking because of the number of issues that must be confronted. While many of the rheumatologic issues are of extreme importance during pregnancy, the obstetrician has an additional perspective on lupus, namely, how it affects the relationship between mother and fetus.

## Preconception Counseling

Fortunately, an increasingly common scenario is the patient with systemic lupus erythematosus (SLE) contacting an obstetrician to discuss planning a future pregnancy. This represents the optimal situation for obstetrician, rheumatologist, and patient. Pregnancy outcome frequently will depend on many factors related to the patient's underlying illness. Therefore, counseling prior to conception may allow for a realistic portrait of successful pregnancy outcome chances to be painted for the patient and her husband. This preconception counseling will cover several areas. The most frequently asked questions of obstetricians by patients relate to the effect of the disease on the pregnancy, the effect of the pregnancy on the disease, and the effect of the disease and/or medications on the fetus.

## The Effect of SLE on Pregnancy

To determine the effect of SLE on pregnancy, we must first review certain aspects of SLE. Among factors affecting pregnancy outcome in patients with SLE will be the presence or absence of hypertension, the presence or absence of renal disease, prior

reproductive history, and disease activity or quiescence.<sup>1</sup> Another factor recently cited as being of prognostic importance is the presence of antiphospholipid antibodies.<sup>2</sup> The patient with the best prognosis is the patient who has had quiescent disease for six or more months prior to conception, no evidence of renal involvement, no evidence of hypertension, no evidence of anticardiolipin or lupus anticoagulant antibodies, and who has either had a previously good reproductive history or whose current pregnancy represents her first one. On the other hand, the poorest prognostic candidate would be the patient with hypertension, renal disease, active disease at the time of conception, and a history of either recurrent pregnancy loss in the first trimester or previous stillbirth thought to be secondary to disease activity or antiphospholipid antibodies.

### Effect of Pregnancy on SLE

Whether or not pregnancy adversely affects the course of SLE remains a point of continuing controversy, with literature supporting both sides of the argument.<sup>3,6</sup> Recent evidence from our own institution however, suggests that pregnant patients with lupus may be at higher risk for flare of their disease than was previously thought. In general, it is believed that careful attention to controlling disease activity in the pregnant patient with lupus is essential.

### Clinical and Serologic Evaluation

The initial clinical evaluation of the patient with lupus is described elsewhere in this journal. Generally, there is little additional clinical evaluation to be done by the obstetrician once a complete rheumatologic evaluation has been accomplished. Serologic evaluation consists of a battery of tests (Table 1) that will assist in establishing a baseline for the individual patient so that management as the pregnancy progresses can be guided, in part, by serologic changes. Serial measurement of C<sub>3</sub> and C<sub>4</sub> may be especially important during pregnancy. C<sub>3</sub> and C<sub>4</sub> normally rise during pregnancy;

falling values may help differentiate a lupus flare from preeclampsia.<sup>7</sup>

Also, certain serologic measurements may allow for identification of particular patients who are at risk for adverse perinatal events. The three most frequently looked at substances in this regard are the lupus anticoagulant, anticardiolipin antibody, and antibodies directed against the Ro (SSA) and La (SSB) antigens.

### Lupus Anticoagulant and Anticardiolipin

The presence of lupus anticoagulant, anticardiolipin, or both, has been implicated in habitual pregnancy loss in the first trimester as well as in unexplained mid-trimester loss.<sup>8,9</sup> Controversy exists as to what the optimal treatment should be when these antibodies are found. In large part, obstetricians are guided by prior reproductive history to determine whether or not treatment needs to be initiated. When it is determined that treatment should be initiated, regimens consisting of aspirin, prednisone, heparin, or some combination thereof, have been employed. In our clinic, the most frequently employed regimen consists of low-dose aspirin (80 mg/day) combined with prednisone. The theory behind low doses of aspirin is that it allows for minimal inhibition of endothelial cell production of prostacyclin while inhibiting platelet thromboxane production, thereby minimizing the risk of thrombotic events. This may be significant not only for clinical thrombophlebitis for which these patients are at risk, but for decidual thrombus formation that may be part of the etiology of unexplained pregnancy loss. Prednisone may also be added to this regimen since it may suppress production of anticardiolipin antibody and production or, at least, activity of the lupus anticoagulant. In our institution, the association of antiphospholipid antibodies, either anticardiolipin or lupus anticoagulant, with pregnancy loss, has not been as strong as in other reports. However, our four patients who have had second-trimester losses have all had antiphospholipid antibodies.<sup>10</sup>

### Anti-Ro Antibody

Identification of patients positive for anti-Ro or anti-La is important, for it is these patients who may be at increased risk of having a child with congenital complete heart block or neonatal cutaneous lupus.<sup>11</sup> While the majority of individuals positive for these antibodies will not have infants with congenital complete heart block, the majority of infants with congenital complete heart block are born to mothers with either anti-Ro or anti-La antibody. Patients thus identified should be monitored closely with careful auscultation of the fetal heart tones for at least a full minute at each prenatal visit. Fetal echocardiography to review for structural abnormalities or any evidence of atrioventricular dissociation may be added to the regimen at the discretion of the clinician.

**Table 1. Initial Laboratory Evaluation of Lupus Pregnancy**

ANA screen and titer	
Anti-dsDNA	
Precipitin antibodies (anti-Ro, anti-La)	
Lupus anticoagulant	
Anticardiolipin	
C <sub>3</sub> , C <sub>4</sub>	
CH <sub>50</sub> (total serum hemolytic complement)	
Chemistry panel and electrolytes	
Complete blood count	
Thyroid stimulating hormone	} If clinically indicated
Free thyroxine	
Anti-platelet antibodies (direct and indirect, if evidence of thrombocytopenia)	
Activated partial thromboplastin time (APTT)	
24-hour urine for total protein, creatinine and calcium excretion	



## Management of the Pregnant Patient

Once the patient with SLE has successfully achieved a pregnancy, careful coordinated management by obstetrician and rheumatologist is essential to optimize the likelihood of a successful outcome. First trimester management from the obstetric standpoint is quite routine. The patient is carefully assessed for any evidence of discrepancy between size and dates, and fetal heart tones should be auscultated at the earliest possible time, usually by nine to ten weeks with Doppler and as early as five weeks with vaginal ultrasound. Serologic evaluation is also done looking for any evidence of disease activity as might be reflected by lowered complement levels, increased proteinuria, or other physical signs or symptoms suggestive of disease flare. Patients frequently will ask about teratogenic effects of medications during pregnancy and usually may be reassured in that the most commonly employed drug, prednisone, has not been demonstrated to be a human teratogen. Utilization of other drugs such as aspirin, dipyridamole, chloroquine, and azathioprine have been successfully used but must be limited to those circumstances in which the benefit of using the drug clearly outweighs the risks. Patients should be seen on a routine basis in the first trimester with documentation of fetal viability at each visit, since these patients are at increased risk for first trimester loss.

In the second trimester of pregnancy, evaluations of mother and fetus should continue. In addition to routinely performed obstetrical tests, it is in the second trimester, usually at approximately twenty-two weeks of gestation, that fetal echocardiography is employed in order to look at structural integrity of the heart. While anatomic abnormalities have not been reported to be increased among patients with SLE, in patients who are anti-Ro or anti-La positive, fetal echocardiography may allow for visualization of atrial and ventricular rates and allow for early identification of rhythm disturbances. Additionally, patients with SLE may be at increased risk for mid-trimester pregnancy loss and should be monitored closely for any evidence of lagging fundal growth.

The third trimester of pregnancy represents a particular challenge because it is at this point that fetal viability has been achieved. In our experience, patients who reach the third trimester have generally done well, although patients with lupus do have an increased incidence of low birthweight and preterm delivery. For reasons that are not entirely clear, patients with SLE are also at increased risk for development of the clinical condition known as preeclampsia. Preeclampsia is a disease characterized by hypertension with proteinuria, edema, or both, which usually occurs in the third trimester but which may occur anytime after the twentieth week of gestation. One of the disconcerting features of preeclampsia is that its clinical presentation nearly exactly mimics the clinical presentation of an exacerbation of lupus. Patients with preeclampsia may

present with hypertension, increasing proteinuria, edema, and thrombocytopenia with elevation of liver enzymes and, occasionally, hemolysis. In some instances, it may be impossible to determine whether or not a patient is experiencing a severe exacerbation of lupus or is presenting with severe preeclampsia. Depending on the gestational age of the fetus, it may be necessary to effect delivery; and, if the clinical symptoms resolve, the diagnosis of preeclampsia is virtually assured. However, delivery may not always be feasible, especially at extremely immature gestational ages (less than twenty-eight weeks). Under these circumstances, if the maternal condition allows for expectant management, a trial of medical therapy may be warranted. If a clinical response occurs, an exacerbation of lupus rather than preeclampsia is suggested. A recent test, that may be of some use in helping to distinguish exacerbations of underlying medical diseases from preeclampsia, has employed the measurement of urinary calcium excretion.<sup>12</sup> Preeclamptic patients seem to have characteristically low excretion of urinary calcium as opposed to patients with underlying renal disease or other medical disorders that may manifest as renal dysfunction with hypertension.

Additional testing in the third trimester consists of intensive fetal surveillance. We choose to employ biophysical profile scoring combined with Doppler velocimetry. The biophysical profile is a test that employs nonstress testing with measurement of amniotic fluid volume, fetal breathing movement, assessment of fetal gross body movement, and fetal tone. A biophysical profile score of 10 (Table 2)<sup>13</sup> is strongly suggestive of fetal well-being. Doppler velocimetry is also a useful tool. This technique employs continuous wave Doppler instrumentation with measurement of umbilical artery flow. A ratio of systolic to diastolic flow in the umbilical artery is obtained. Normal values are gestational age-specific, but abnormal values suggestive of increased placental vascular resistance have been associated with intrauterine growth retardation, preeclampsia, and other systemic diseases that may involve abnormal placentation. These tests should be employed on a weekly basis, although their frequency may be increased depending on the clinical situation. In patients who are obese or who otherwise are difficult to examine, monthly ultrasonography for fetal morphometry and weight estimation may be a useful adjunct to clinical assessment of intrauterine growth.

## Intrapartum Considerations

When the patient has entered spontaneous labor or when a clinical situation arises dictating the need for delivery, a combined approach to the delivery process involving obstetrics, anesthesiology, rheumatology, and neonatology will once again contribute to optimizing the chances of a successful outcome.



## Obstetric Considerations

While these high-risk pregnancies may carry with them an increased risk of delivery by cesarean section, by and large, obstetric management may remain routine. Continuous electronic fetal monitoring is recommended for all pregnancies complicated by SLE. There is no contraindication to regional anesthesia, although for patients who have been on chronic low-dose aspirin, a bleeding time may be requested by anesthesiology before placement. There are no large studies suggesting that low-dose aspirin adversely affects bleeding time. Route of delivery is generally indicated by obstetric indications. On occasion, a pregnant patient with lupus may exhibit thrombocytopenia with anti-platelet antibodies. In general, these patients may be managed according to the protocols governing management of patients with immune thrombocytopenia. That is, if they have no bleeding history, if their thrombocytopenia was first noted in this pregnancy, and especially if they do not carry indirect circulating anti-platelet antibodies, then fetal platelet assessment prior to labor may not be necessary. If there is any doubt as to what the fetal platelet count or function might be, then consideration may be given to umbilical blood sampling, fetal scalp blood sampling, or delivery by cesarean section in an effort to minimize the risk of trauma and potentially devastating intracranial hemorrhage in the fetus.<sup>14</sup>

## Anesthetic Considerations

In general, the pregnant patient with lupus may receive anesthesia and analgesia without restriction. Specific information regarding medication usage or other disorders such as restrictive pleuritis or pericarditis should be evaluated by the anesthesiology team, preferably well in advance of the patient's presentation for labor and delivery.

**Table 2. Biophysical Profile Scoring**

Parameter	Normal (= 2)	Abnormal (= 0)
Non-stress test	Reactive	Non-reactive
Amniotic fluid volume	Minimum 2 cm x 2 cm pocket of fluid	Less than 2 x 2
Fetal movement (body)	3 separate movements in 30 minutes	Less than 3 movements
Fetal movement (breathing)	At least one 30 second fetal breathing episode in 30 minutes	Less than one 30 second episode in 30 minutes
Fetal tone	Minimum of one episode of active flexion/extension during study	Less than one episode, or absent movement

Adapted from Manning FA. Dynamic ultrasound-based fetal assessment: The fetal biophysical score. In: Fleischer AC, Romero R, Manning FA, Jeanty P, James AE, eds. Norwalk, CT: Appleton and Lang 1991; 417-28.

## Rheumatologic Considerations

In this setting, the rheumatologist generally remains available as a consultant for cases of disease exacerbation in the postpartum period. As many patients will have been receiving continuous steroids during pregnancy, stress doses are administered during labor. Hydrocortisone 100 mg intravenously every eight hours is usually sufficient to cover patients during the intrapartum period.

## Neonatology Considerations

A neonatologist should be informed of all deliveries of mothers with lupus. While presence at the delivery may not be absolutely necessary, notification of such a delivery with detailed information on the antepartum course is essential if proper evaluation in the newborn nursery is to occur. Newborns of mothers with lupus may themselves have thrombocytopenia and may be at risk for the development of neonatal lupus. Neonatal lupus remains a relatively rare disease with the two most common presentations being that of cutaneous lupus or congenital complete heart block. Pediatric awareness of the clinical situation is generally all that is necessary. Neonates usually do well and their performance is usually gestational age dependent. Neonatal adrenal suppression secondary to maternal corticosteroid use is an extremely rare event. Additionally, breast feeding is not contraindicated in mothers who are taking prednisone for control of lupus symptoms, although this should be discussed with the newborn's pediatrician prior to implementation.

## Postpartum

After delivery, a small number of lupus patients may experience disease exacerbations.<sup>15</sup> For this reason, we generally recommend gradual tapering of medications back to prepregnancy levels or to discontinuation when feasible. Routine postpartum activities are generally allowed. The contraceptive options for patients with lupus need to be discussed at this time. Oral contraceptive use in patients with lupus remains somewhat controversial because of past studies showing exacerbation of disease.<sup>16</sup> Therefore, barrier methods of contraception are preferred. In patients in whom this is unacceptable, oral contraceptives with the lowest effective estrogen dose should be prescribed. Patients with evidence of antiphospholipid antibodies are counseled to avoid oral contraceptives because of a potential increased risk of thromboembolic disease. The new contraceptive, Norplant, may be useful in these individuals but there are no data on its safety or efficacy in lupus patients.

## Conclusion

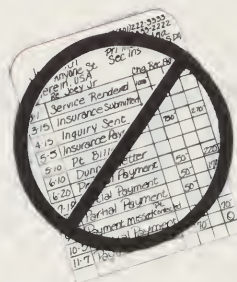
Much progress has been made in the management



of SLE. The fruits of these successes have allowed for many women who, a decade ago, might have been told to never have children, to begin contemplation of having a family of their own. It is clearly a decision that is not to be taken lightly. However, with patient compliance, preconception counseling, and a comprehensive approach by internist, rheumatologist, obstetrician, and perinatologist, successful outcomes are being increasingly reported.

### References

1. Out HJ, Derksen RHWM, Christiaens CGML. Systemic lupus erythematosus and pregnancy. *Obstet Gynecol Surv* 1989; 44:585-91.
2. Lockshin MD, Druzin ML, Goei S et al. Antibody to cardiolipin as a predictor of fetal distress or death in pregnant patients with systemic lupus erythematosus. *N Engl J Med* 1985; 313:152-6.
3. Garsenstein M, Pollak VE, Kark RM. Systemic lupus erythematosus and pregnancy. *New Engl J Med* 1962; 267:165.
4. Zulman JJ, Talal N, Hoffman GS et al. Problems associated with the management of pregnancies in patients with systemic lupus erythematosus. *J Rheumatol* 1980; 7:37.
5. Syrop CH, Varner MW. Systemic lupus erythematosus. *Clin Obstet Gynecol* 1983; 26:547.
6. Varner MW, Meehan RT, Syrop CH et al. Pregnancy in patients with systemic lupus erythematosus. *Am J Obstet Gynecol* 1983; 145:1025.
7. Buyon JP, Cronstein BN, Harris M, Tanner M, Weissman G. Serum complement values to differentiate between SLE activity and preeclampsia. *Am J Med* 1986; 81:194-200.
8. Branch DW, Scott JR, Kochenour NK, Hershtgold E. Obstetric complications associated with the lupus anticoagulant. *N Engl J Med* 1985; 313:1322-6.
9. Petri M, Golbus M, Anderson R et al. Antinuclear antibody, lupus anticoagulant, and anticardiolipin antibody in women with idiopathic habitual abortion: A controlled prospective study of 44 women. *Arthritis Rheum* 1987; 30:601-6.
10. Petri M, Repke J. Prediction of pregnancy loss or pre-term birth in lupus pregnancy: A prospective study of 36 pregnancies. *Arthritis Rheum* 1990; 33:528.
11. Petri M, Watson R, Hochberg MC. Anti-Ro antibodies and neonatal lupus. *Rheum Dis Clin North Am* 1989; 15:335-60.
12. Taufield PA, Ales KL, Resnick LM, Druzin ML, Gertner JM, Laragh JH. Hypocalciuria in preeclampsia. *N Engl J Med* 1987; 316:715-8.
13. Manning FA. Dynamic ultrasound-based fetal assessment: The fetal biophysical score. In: Fleischer AC, Romero R, Manning FA, Jeanty P, James AE, eds. *The Principles and Practice of Ultrasonography in Obstetrics and Gynecology*. Norwalk, CT: Appleton and Lang, 1991; 417-28.
14. Samuels PA, Bussell JB, Braitman LE et al. Estimation of the risk of thrombocytopenia in the offspring of pregnant women with presumed immune thrombocytopenic purpura. *N Engl J Med* 1990; 323:229-35.
15. Petri M, Howard D, Repke J. Frequency of lupus flare in pregnancy: The Hopkins Lupus Pregnancy Center experience. *Arthritis Rheum*. In press.
16. Jungos P, Dougados M, Pelissier C et al. Influence of oral contraceptive therapy on the activity of systemic lupus erythematosus. *Arthritis Rheum* 1982; 25:618.



## Leave the Billing To Us

### Professional Billing Associates, Inc.

#### A Superior Billing Service

- Fast and accurate
- Lower overhead
- Increase patient reimbursement
- No hassle automation

Let us put our combined 25 years of medical billing expertise and insurance experience to work for you. P.B.A. Inc. will make your practice more efficient and profitable.

Call us for a free consultation

**Professional  
Billing  
Associates, Inc.**

P.O. Box 30, Burtonsville, MD. 20866  
301-421-1925 301-608-9243



## THE WASHINGTON ADVENTIST HOSPITAL

TENTH ANNUAL CARDIOLOGY  
SYMPOSIUM

### UPDATES IN CLINICAL CARDIOLOGY: Advances for Today's Use

A PRACTICAL REVIEW COURSE FOR  
THE PRIMARY CARE PHYSICIAN

Registration: (301) 424-0193

FRIDAY, NOVEMBER 22, 1991  
BETHESDA MARRIOTT HOTEL  
BETHESDA, MD  
8:45 AM - 5:00 PM

# Commitment and Service Since 1975

The *Med Chi Agency* was established by the Medical and Chirurgical Faculty in 1975 and now has over 5,000 physicians and employees as clients.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial products. You will benefit from the many coverages available for both your professional and personal needs. You will also benefit indirectly, because Med Chi owns the *Med Chi Agency* and the earnings from its operations.

For complete information about any insurance product or service, just give us a call. We can provide the answers you seek and the solutions you need.



## **THE MED CHI AGENCY**

1204 Maryland Avenue  
Baltimore, MD 21201  
301-539-6642 Toll Free-1-800-543-1262  
FAX-1-301-752-5421



---

# Medical Therapy for SLE

---

David B. Hellmann MD

---

*Dr. Hellmann is Associate Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD.*

*"Have a chronic disease and take care of it."  
Oliver Wendell Holmes' formula for longevity.*

---

*Today, the major therapeutic challenge in systemic lupus erythematosus is to preserve the gains provided by corticosteroids while reducing their side effects.*

---

**T**he generally favorable course of patients with systemic lupus erythematosus (SLE) today demonstrates powerfully the wisdom of Justice Holmes' words.<sup>1-4</sup> Lupus, however, was not always considered a chronic disease. In the 1950s, half of all patients died within four years from intractable, autoimmune-induced multisystem organ failure.<sup>5</sup> Now, fortunately, early death is a striking exception.<sup>1</sup> Most recent series show a 75 to 90 percent ten-year survival, with much longer survival expected for the majority. These dramatic improvements in survival emphasize physicians' increasing ability to take care of this chronic disease. This article describes the treatments, and their application, efficacy, and limits.

## Non-pharmacologic Therapies

Most people who are well and fortunate enough to take their health for granted, live with the illusion that they have control over their lives. Chronic diseases destroy that illusion. The impact of this on the patient is always forceful, sometimes overwhelming, and many times more distressing than any physical effect of SLE. Younger patients worry about physical attractiveness and providing for children; older patients worry about threats to their independence. All are uncomfortably aware of their own mortality.

The effectiveness of the physician and the satisfaction of the patient are as much dependent on the physician's skill in handling these and other emotional consequences of the disease as on the skill of the pharmacologic manipulations. As soon as the diagnosis of SLE is established, the emotional needs of the patient can begin to be addressed by considering the following.

*Patient Education.* One important way patients regain some sense of control is through education -- to know something is, in part, to control it. Asking the patient what s(he) knows about SLE is a good place to begin judging the patient's exact educational

needs. While educational backgrounds vary, all patients and families benefit from a comprehensible explanation of lupus as an autoimmune disease. One helpful analogy is to describe the immune system as the body's police department which is designed to protect against disease-causing microorganisms; an autoimmune disease such as lupus can, therefore, be considered an example of biologic police brutality in which the immune system attacks the normal denizens of the body (e.g., the kidney, skin, lungs).

The concept of empiric and chronic therapy should also be explained. Most new patients think of therapy as a short course of antibiotics which is universally effective. Long-term therapy with slower acting agents is a foreign notion which should be introduced, explained, and discussed.

The prognosis of patients with SLE should also be sketched in broad strokes. Most patients have an overly pessimistic view and are relieved to learn how very well patients, on average, do. Similarly, patients can gain hope from learning that the severity of lupus varies greatly from individual to individual, with many having only very mild disease. Issues related to pregnancy and disability may also warrant early discussion.

Clearly, not all questions can be discussed in depth at one sitting; education for the patient must be a life-long process. The physician as teacher can be assisted by many others including nurses, physical therapists, occupational therapists, social workers, and other patients who participate in self-help groups. The Lupus Foundation of Maryland and the Arthritis Foundation of Maryland also have many excellent publications and sponsor helpful informational meetings.

**Family Education.** However abstruse and threatening lupus is to the patient, it is equally so to family and to friends. A better understanding of the nature of SLE and its vicissitudes will relieve family anxieties and improve the family's ability to offer emotional support. A spouse and, whenever appropriate, other family members or friends, should accompany the patient for an appointment devoted largely to the discussion of lupus and its impact on the patient. The doctor can then describe two features of lupus that baffle patients and family -- the day-to-day variation and the sometimes incapacitating fatigue which can accompany lupus. That one can have active lupus, feel miserable, and yet appear perfectly well is a puzzling reality that needs description and explanation. Thus, the effective clinician must broaden the educational process to include the patient and the people who support him or her.

**Diet/Exercise.** There is no evidence that diet or exercise has any effect on the activity of SLE. Studies in laboratory animals have suggested that dietary modifications can influence inflammatory outcomes, but no such data exist for humans.<sup>6</sup> Still, diet and exercise should not be dismissed, as they may very well be useful tools to limit the toxicity of prednisone (if needed) and may also be psychologically beneficial.

## General Principles of Pharmacologic Therapy

**Overview.** In a sense, treating SLE is like fire-fighting; the physician must constantly be alert and vigilantly search for the smoke and heat (i.e., organ damage) that indicate that the fire (inflammation) has rekindled. Once spotted, the severity and extent of the fire (inflammatory damage) must be assessed accurately to determine the appropriate response. Small fires (e.g., minor arthritis or minor skin rashes) can be fought with garden hoses (e.g., nonsteroidal anti-inflammatory drugs or corticosteroid creams), larger fires (e.g., pericarditis) may require a fire hose (e.g., moderate dose prednisone), and a conflagration (e.g., diffuse vasculitis) requires a four-alarm response (e.g., high-dose prednisone and possibly an immunosuppressive drug).

The principle that the intensity of treatment must fit the intensity of the disease activity derives from several crucial observations confirmed by multiple studies. These studies demonstrate that for treatment to improve on the now excellent prognosis, the toxicity of therapy must be reduced.<sup>7-10</sup> There is abundant evidence that the major limitations which long-term survivors of SLE face are avascular necrosis of bone and accelerated coronary artery disease -- both largely complications of chronic corticosteroid therapy.<sup>8-10</sup> Another major limitation that can occur early or late is the risk of fatal infection.<sup>9</sup> Indeed, infection has become the number one cause of death in SLE. While patients with SLE have multiple risk factors for infection, high-dose prednisone therapy appears to be the most important. Thus, while the ability of the currently available hoses to put out the fire of SLE is impressive, future gains require limiting the effects of the water damage. The principle that the right size hose must be used for the right size fire is the most important guideline for the pharmacologic therapy of SLE (Table 1).

**Prednisone.** Corticosteroid therapy is the cornerstone of the pharmacologic treatment of SLE.<sup>1,11-21</sup> Of the many preparations of corticosteroids, prednisone is the most common oral formulation used.

Prednisone is a pre-drug that is inactive until it is hydroxylated in the liver to prednisolone.<sup>11,12</sup> Consequently, in patients with severe hepatic disease, prednisolone rather than prednisone should be used.<sup>22-24</sup> In the absence of liver disease, prednisone and pred-

**Table 1. Intensity of Therapy Matches Intensity of Disease Activity**

Disease Manifestations	Possible Therapies
Skin rash	Sun screens, topical corticosteroids, hydroxychloroquine
Arthritis, mild pleuritis	Nonsteroidal anti-inflammatory drugs, hydroxychloroquine
Moderately severe arthritis, fever, pericarditis, polymyositis	Low-medium dose prednisone (10-40 mg/d)
Abdominal vasculitis, severe hemolytic anemia, thrombocytopenia, nephritis	High dose prednisone (40-80 mg/d) and/or immunosuppressive therapy



nisolone are equipotent. Patients ill enough to be hospitalized are often given corticosteroids intravenously as methylprednisolone, which is 20 percent more potent than prednisone (i.e., 50 mg of prednisone equals 40 mg of methylprednisolone).

The dose schedule, like the route of administration, depends on the severity and intensity of the SLE; 20 mg of prednisone given every eight hours is more effective than 60 mg given as a single daily dose. It is also more toxic. But with acute and severe inflammation, where rapid control is the major concern, divided dosing for one to two weeks is preferred. Thereafter, the dose can be consolidated over approximately two weeks to a single daily dose.

Administration of large doses of corticosteroids has become popular in the treatment of rheumatic diseases including SLE.<sup>18,19,21</sup> The enthusiasm stems from the positive results reported with intravenous pulse therapy (i.e., 1,000 mg methylprednisolone given daily for three days) for idiopathic crescentic glomerulonephritis.<sup>20</sup> Attempts to limit toxicity have prompted the use of mini-pulse therapy (i.e., 100 mg of methylprednisolone per day for three days).<sup>25</sup> Thus, in settings requiring high-dose corticosteroids, possible treatments include either oral prednisone 40-80 mg/d or some version of the intravenous pulse therapy. The absence of convincing comparative studies explains the variation in treatment seen in clinical practice.

The toxicity of corticosteroids (Table 2) is a function of the dose and duration.<sup>7,8,11-16,26,27</sup> For some patients, the side effects are worse than the disease. Indeed, the infectious complications of corticosteroids can be fatal. It cannot be emphasized too strongly that the dose and duration of therapy must be justified by the severity of the inflammation.

**Dose Reduction.** The timing of the reduction also depends on the severity of the disease and the response to treatment. Ideally, the original abnormality should be reversed before dosage reduction is begun, but no absolutely firm rule can be given. Because patients with SLE are exquisitely sensitive to dose changes, tapering should usually be slow, with weekly reductions not exceeding 10 to 20 percent of the current dose. The decre-

ments may need to be greater for patients on very high dose therapy. Once the patient gets down to a very low dose (approximately 5 mg/d), the decrement should be in the range of 1 mg per month to allow the patient to adjust to resumption of adrenal function.

**Second-line Agents.** Many different immunosuppressive drugs have been used in SLE (Table 3).<sup>28-40</sup> Their use springs from the hope of finding an agent more effective than high-dose prednisone yet less toxic. Only in lupus nephritis, however, has the efficacy and toxicity been rigorously studied.<sup>35</sup> In all other settings, the indication for a second-line agent is not clear. In clinical practice, second-line agents are considered only when prednisone is ineffective or excessively toxic.

**Monitoring Disease Activity.** Given the autoimmune nature of SLE, it was hoped that serologic tests would faithfully reflect disease activity and help determine the timing and duration of therapy.<sup>36</sup> Unfortunately, serologic tests have many limitations.<sup>40</sup> First, antinuclear antibodies, with the exception of anti-native deoxyribonucleic acid (DNA), do not correlate well with disease activity. Even with the anti-native DNA, the correlation with disease activity is not very strong.<sup>40</sup> A rapid doubling of the anti-native DNA antibody is a better indicator of a flare of disease activity than the actual antibody level itself.<sup>41</sup> Complement tests do not perform much better.<sup>40</sup> It is perhaps not surprising that complement tests, which reflect the average of production and consumption throughout the entire body, may not sensitively measure autoimmune disease occurring in one or several organs. Studies have shown that whether complement is low depends greatly on the sites of inflammation.<sup>40</sup> When renal and extra-renal disease are present, complement is almost always low, whereas extra-renal disease alone produces hypocomplementemia in only a minority of patients.<sup>40</sup> Thus, a patient can have raging central nervous system SLE and normal serum complements. With most patients, it becomes evident during the first two years whether complement tests correlate with disease activity. In such patients, the complement levels do indeed help monitor the course. For most patients, however, therapeutic decisions remain based on clinical evidence of active organ damage.

**Is It Active SLE?** It is critically important to recognize that other disease processes can mimic or be superimposed upon active SLE. The most important poseur of active disease is infection.<sup>9</sup> It is crucial to begin any therapeutic consideration with the question: could an infection be the cause of this putative lupus flare?

**Table 2. Possible Side Effects of Corticosteroid Therapy**

General	Increased appetite, weight gain, cataracts
Cutaneous	Striae, moon facies, buffalo hump, acne, easy bruisability
Endocrine	Diabetes
Gastrointestinal	Gastric ulcer, hemorrhage, perforation, pancreatitis
Bone	Osteoporosis, avascular necrosis of bone
Immunologic	Opportunistic infections
Cardiovascular	Salt retention, edema, hypertension, accelerated coronary artery disease
Neurological	Emotional lability, psychosis, insomnia, decreased memory, proximal muscle weakness

**Table 3. Second-line Treatments of SLE**

Cyclophosphamide
Azathioprine
Chlorambucil
Methotrexate
Plasmapheresis
Total lymph node irradiation
Cyclosporine - A



Failure to distinguish *Pneumocystis pneumonia* from lupus pneumonitis or cryptococcal meningitis from lupus cerebritis will have disastrous consequences.<sup>9</sup>

It cannot be overemphasized that infection is now the number one cause of death; active disease is number two.<sup>9,10,42-44</sup> Most fatal infections are caused by opportunistic infections and the major risk factors are high-dose prednisone and the use of immunosuppressive drugs.<sup>9</sup> While SLE itself -- through renal failure, hypocomplementemia, hyposplenism, and other immunologic defects -- can be a risk factor, major infections are infrequent in the absence of high-dose corticosteroid or immunosuppressive therapy.<sup>9</sup> These facts again emphasize the importance of using the smallest effective dose of prednisone for the shortest possible time.

Drug reactions are a second important impersonator of active SLE. NSAIDs rarely can produce meningitis and, not so rarely, renal disease.<sup>45</sup> Toxic levels of aspirin can produce breathlessness so that a salicylate level in the right patient can prevent a cumbersome pulmonary evaluation. Hydroxychloroquine is a rare cause of myositis. Even more dramatically, drugs such as penicillamine, procainamide, and hydralazine can cause SLE.<sup>46</sup> Consequently, before prednisone is initiated or increased, other possible explanations for the manifestations must be considered.

### Treatment of Specific Manifestations

**Cutaneous Manifestations.** Since many of the cutaneous manifestations of SLE are brought on or exacerbated by sunlight, the first step in treatment is to minimize sun exposure by avoiding direct sunlight, especially during midday hours, and by using wide-brimmed hats and sunscreen lotions.<sup>47-50</sup> Topical corticosteroids are effective for most skin lesions of SLE but are not practical for extensive involvement. Powerful fluorinated topical corticosteroid preparations are usually avoided for the face and used sparingly elsewhere because of the risk of disfiguring cutaneous atrophy with prolonged use. Intradermal injections of corticosteroids are effective for solitary, severe discoid lesions.

Oral therapy with the antimalarials hydroxychloroquine or chloroquine is frequently used to treat skin disease not amenable to topical therapy.<sup>51</sup> Hydroxychloroquine, the most commonly used agent, is usually very well tolerated. The most feared toxicity is decreased vision resulting from uptake of the antimalarials by the retinal pigmented epithelium.<sup>52-54</sup> The chance of retinal damage is very small (less than 1 percent) when the daily dose does not exceed 400 mg.<sup>52</sup> As an extra precaution, the patient should have an ophthalmologic evaluation initially and every six months thereafter. Many ophthalmologists will provide patients with charts that allow the patient to detect early any subtle deficiencies in color vision -- the first

symptom of retinal toxicity. Rarer side effects include myopathy, leukopenia, and cardiomyopathy. Gastrointestinal intolerance can usually be overcome by nighttime dosing. The major limitation of hydroxychloroquine is its slow onset of action (one to six months). Dapsone is an effective agent for certain forms of cutaneous lupus erythematosus, especially bullous lesions.<sup>55-57</sup> Drug-induced hemolytic anemia is common and must be monitored carefully with complete blood counts and reticulocyte counts. Glucose-6-phosphate dehydrogenase (G6PD) deficiency contraindicates the use of Dapsone.

Oral corticosteroids are very effective for cutaneous SLE but because of toxicity, they are used only when other agents have failed or the patient has other features of SLE (e.g., nephritis) that require oral corticosteroids.

**Arthritis and Arthralgias.** Nonsteroidal anti-inflammatory drugs (NSAIDs) usually effectively relieve the arthralgias or the arthritis of SLE. There is nothing to recommend any particular NSAID; all NSAIDs from the venerable aspirin to the latest new fangled NSAID are equally likely to be effective. If aspirin is chosen, an enteric preparation should be used to reduce the risk of gastric ulceration to the level seen with any of the newer NSAIDs.<sup>58</sup> A NSAID should be used for two to three weeks at full dose before considering a different one. The toxicity of NSAIDs in SLE is similar to that for other populations with the important exception that liver toxicity may be more frequent.

Hydroxychloroquine at 200-400 mg/d is also effective for SLE joint disease. A recent placebo-controlled study suggested that hydroxychloroquine reduces the risk not only of minor flares but also of major flares.<sup>54</sup> Because hydroxychloroquine is a slow-acting agent, requiring up to three to six months of use before becoming effective, initial concomitant coverage with NSAIDs may be required.

Systemic corticosteroids, in doses of 5-15 mg/d, dramatically eliminate or reduce arthritis. As with the treatment of skin disease, the availability of other effective and less toxic agents means that corticosteroids are rarely indicated in the treatment of arthritis alone.

**Serositis.** Pleuritic chest pain in the absence of other severe symptoms usually responds to NSAIDs.<sup>59,60</sup> Occasionally, severe pleuritis may require low doses of prednisone (10-20 mg/d).<sup>61</sup> Pericarditis of a very mild degree may respond to NSAIDs but frequently requires prednisone (10-20 mg/d). Higher doses are required if a more serious manifestation such as myocarditis is present.<sup>62</sup>

**Lupus Nephritis.** The importance of renal disease is emphasized by its frequency (seen in 50 percent of patients)<sup>35</sup> and severity (the second most common cause of death after infection).<sup>63</sup> Many studies in the last decade have helped define the course and response to therapy but therapeutic controversies remain.<sup>29-35,64-81</sup>

Perhaps no topic is more controversial than the role



of renal biopsy.<sup>72,76</sup> To a degree, the data are quite clear.<sup>35,76</sup> Renal biopsy does add prognostic information not otherwise available and does help predict who is most likely to lose renal function.<sup>35,76</sup> Somewhat surprisingly, the renal biopsy information that is most predictive is the level of scarring as measured by a chronicity index.<sup>35,76</sup> The World Health Organization (WHO) classification of lupus nephritis (including normal, mesangial, focal proliferative, diffuse proliferative, and membranous glomerulonephritis) does not add predictive power. With multiple studies reaching the same conclusion, the power of renal biopsy to add prognostic information is firmly established.

Better predictions do not, however, guarantee better therapies. There has been no prospective study to determine if the renal biopsy data can improve therapy and, therefore, the outcome. Should the presence of much scarring prompt aggressive therapy to prevent worsening? Or should such scarring indicate that the patient is very unlikely to benefit from any therapy and should, therefore, avoid the increased risk of a cytotoxic agent? Until these questions are answered, reasonable people will continue to debate the appropriateness of renal biopsy.

Much information has been gained on the efficacy of various treatments of one form of lupus nephritis -- diffuse proliferative glomerulonephritis.<sup>35</sup> These studies, chiefly from the National Institutes of Health (NIH), have demonstrated that cyclophosphamide therapy is more effective than prednisone in terms of preventing renal failure.<sup>35</sup> However, while cyclophosphamide therapy improves renal survival, it does not improve overall survival.<sup>35</sup>

Indeed, the toxicity of cyclophosphamide is substantial (Table 4).<sup>35</sup> Perhaps of most concern is that fully 18 percent of lupus nephritis patients treated long-term with oral cyclophosphamide have developed a malignancy.<sup>35</sup> Infections, especially with herpes zoster, infertility, and hemorrhagic cystitis, have dampened enthusiasm for this therapy.<sup>35</sup>

Such problems have sparked attempts to determine if alternative routes of administration might be as effective but less toxic. Specifically, intravenous, intermittent pulse cyclophosphamide therapy (.5 - 1.5 grams each month) has been tried.<sup>35</sup> The initial reports, based on a shorter and smaller experience than with oral cyclophosphamide, have been encouraging.<sup>35</sup> Intravenous cyclophosphamide does appear to reduce the chance of developing hemorrhagic cystitis, infection, and possibly malignancy.<sup>35</sup> Yet not all centers report such benign results; important infections, hemorrhagic cystitis, and malignancy have been associated

with intermittent pulse cyclophosphamide.<sup>82-84</sup> Until the long-term toxicity of pulse cyclophosphamide is known, such therapy should be recommended with great caution.

Other second-line agents (Table 3) have been used for lupus nephritis, including azathioprine and chlorambucil, but much less is known about their relative efficacies.<sup>33,75</sup> Throughout most of the United States, prednisone and cyclophosphamide are the most commonly used agents in the treatment of lupus nephritis.

Controversies involve not only which agent to use but also how SLE nephritis should be followed. What are the reliable markers of improvement or worsening? Specifically, several authors have shown that in many different forms of renal disease including lupus nephritis, serum creatinine and creatinine clearance are inaccurate measures of the glomerular filtration rate.<sup>65,69,85</sup> Unfortunately, an accurate, inexpensive, and widely available alternative does not yet exist.<sup>85</sup> Nuclear medicine techniques for measuring the glomerular filtration rate are accurate and available at some centers but are hospital-based and expensive.<sup>85</sup>

Other markers of renal disease activity deserve comment. It is important to recognize that proteinuria or hematuria can occur with either an active lesion or with a scarred one. On the one hand, an increase in hematuria or proteinuria usually indicates active disease. On the other hand, healed glomerulonephritis may result in stable, persistent minor hematuria or proteinuria. Complete restoration of the urine to normal may not always be possible; persistent minor abnormalities must be interpreted in the context of the entire clinical picture.

Often, assessments of renal disease activity will be influenced by serologic tests. Of all the organ system diseases, renal disease is the one in which serologic tests are most frequently meaningful.<sup>39</sup> Typically, with or before the onset of clinical nephritis, complement levels fall and anti-native DNA levels rise.<sup>36</sup> With successful treatment, the serologic abnormalities usually reverse.

It is important to recall that not all renal disease in patients with SLE is due to lupus. Lupus patients with a falling glomerular filtration rate should be subject to the same differential diagnostic considerations as any other patient. In particular, NSAID or other drug-induced renal insufficiency, urinary tract infection, obstruction, amyloid, and multiple myeloma are among the other reasons patients with SLE may develop renal insufficiency. Even with lupus nephritis, other related problems, such as renal vein thrombosis, may be responsible for some of the fall in glomerular filtration rate.<sup>77</sup>

This author rarely recommends that patients have renal biopsies since although this information improves predictions, it does not improve the treatment of lupus nephritis. Biopsies are recommended only

**Table 4. Major Toxicities of Cyclophosphamide**

Hemorrhagic cystitis
Infection (especially herpes zoster)
Gonadal failure (infertility, premature menopause)
Malignancy



when there is substantial doubt as to whether the renal disease is actually due to lupus. A young woman with a one-year history of lupus and a new nephrotic syndrome accompanied by a multiple organ system flare, red cell casts, hypocomplementemia, and markedly elevated anti-DNA, undoubtedly has lupus nephritis; a biopsy is not needed. On the other hand, a woman with a fifteen-year history of SLE which has never included renal disease who suddenly develops four grams of proteinuria with a normal urinalysis, normal serologies, and no other clinical evidence of SLE, should be suspected of having another cause of renal disease. Renal biopsy may be needed to provide the exact diagnosis. In the more common settings where lupus is clearly the cause, a biopsy is not needed.

Treatment of lupus nephritis should begin with prednisone at a dose of 40-60 mg/d. The cyclophosphamide bandwagon rolling across the nation should not, in the author's view, be jumped on too quickly. Some patients will respond to two to three months of prednisone and can be spared exposure to cyclophosphamide -- a drug that helps save kidneys but not lives. If the patient does not respond to prednisone -- as defined by an overall assessment of urine sediment, proteinuria, glomerular filtration, and serologic tests -- then an immunosuppressive drug such as cyclophosphamide can be added for a three to six month trial. Once an immunosuppressive drug is active, the prednisone should be tapered to less than 20 mg/d. The greatest risk of an opportunistic infection appears to be in those patients taking both high-dose prednisone and an immunosuppressive drug.

The risk of neoplasia associated with immunosuppressive drugs makes it essential to keep the exposure to these agents to as short a time as possible. Most patients will achieve a maximal response by three to six months; thereafter, deliberate tapering should proceed.

At every juncture in the treatment of lupus nephritis, the physician should ask, "are the benefits of additional aggressive treatment likely to exceed the risk?" The patient with a recent onset of nephritis and a large reserve of renal function is likely to benefit from aggressive treatment. But a patient with a history of SLE, diabetes, hypertension, and a chronically progressive renal failure with a current serum creatinine of 5 mg/dl may not; aggressive or prolonged therapy may have greater risks than benefits. This is particularly true since the management of end-stage renal failure secondary to SLE is generally as successful as it is in other diseases.<sup>66</sup> Indeed, most, but not all, SLE patients who develop end-stage renal disease experience a remission of the lupus in other organ systems.<sup>66,70</sup> Renal transplantation has been shown to be very effective in SLE. Reoccurrence of renal disease after transplant is rare.

As in any form of renal disease, careful attention to blood pressure control and diet, and avoidance of potential nephrotoxins are important adjunctive measures.

**Neuropsychiatric SLE.** The treatment of the neuropsychiatric manifestations of SLE is extremely challenging for several reasons. First, neuropsychiatric disease is very heterogeneous.<sup>86-96</sup> Second, some of the neuropsychiatric manifestations can be devastating.<sup>86-96</sup> Central nervous system (CNS) lupus is second only to renal disease as the form of disease activity most responsible for deaths.<sup>63</sup> Third, the clinician must always keep in mind that other disease processes, especially infection and drug reactions, can mimic CNS lupus.<sup>9</sup> Fourth, the laboratory tests, in contrast to renal disease, have many more limitations in establishing a diagnosis.<sup>86,87,93,95</sup> Indeed, the diagnosis of neuropsychiatric lupus is often based on an exclusion of other causes; the presence of active lupus in other organs is not necessary but when present does help confirm the diagnosis. Fifth, and also in contrast to renal disease, much less is known about the efficacy of therapy. The treatments of the different manifestations vary sufficiently to require separate discussions for the major nervous system manifestations.

**Depression** is the most common of the neuropsychiatric manifestations of SLE and can be part of the emotional (and understandable) reaction to the situation or it can be precipitated or aggravated by prednisone.<sup>86</sup> Whether SLE itself can biologically cause depression is not established. The treatment of reactive depression in lupus is similar to that for any reactive depression; compassion, understanding, and encouragement are usually sufficient but psychotherapy, possibly with antidepressants, may be required in some cases.

**Neuropsychiatric effects of prednisone** occur frequently and range from mild anxiety or depression to full-scale psychosis.<sup>86,87</sup> Individuals show enormous variation in susceptibility to these effects. While some effects can be seen in some individuals at any dose, the effects are more frequent and more severe at the higher doses. Differentiating these drug-induced changes from active SLE is often difficult and sometimes impossible strictly on clinical grounds. In such cases, only an empiric careful tapering of prednisone clarifies the picture.

When persistent activity in other organs demands aggressive therapy despite disabling prednisone effects on the central nervous system, substitution with an immunosuppressive agent may be indicated. Judicious use of antidepressants or anxiolytic agents can palliate the symptoms and allow continued use or slow reduction of prednisone.

**Seizures** occurring in the setting of active CNS lupus -- as perhaps manifested by an abnormal cerebral spinal fluid and active SLE in other organs -- should be treated with both high-dose prednisone (e.g., 60-80 mg/d of prednisone or equivalent in divided doses) and anticonvulsants.<sup>86</sup> The choice of anticonvulsant depends on the type of seizure. Grand mal seizures are usually treated with phenytoin.

Traditionally, psychosis and organic brain syndrome



are treated with high-dose corticosteroids (e.g., prednisone 50-80 mg/d in divided doses) but the responsiveness is at best, slow.<sup>86</sup> Several weeks or longer may pass without substantial improvements. Thus, in the case of psychosis, antipsychotic medications -- especially haloperidol -- may be at least as important as prednisone in the early treatment.

Contrary to common belief, visible vessel vasculitis makes up no more than approximately 10 percent of all cases of CNS lupus.<sup>86,92</sup> The consequences of this infrequent form, however, are profound, with major stroke syndromes possible. The first issue is to establish the cause. Active SLE elsewhere provides strong circumstantial evidence that SLE vasculitis is at work. Hypocoagulable states due to the lupus anticoagulant, emboli from endocarditis, vasculopathies from cocaine or amphetamine abuse, and arteriosclerotic vascular disease, all must be considered as possible etiologies. CNS vasculitis is usually treated with high doses of prednisone (60-80 mg/d of prednisone or equivalent) for at least one to two months before beginning a slow tapering.

**Transverse myelitis** can be a rapidly devastating lesion which may be halted and, less commonly, reversed by immediate use of high-dose prednisone.<sup>89,96</sup> Yet even with rapid therapy, morbidity and mortality are substantial.<sup>86</sup>

**Peripheral nervous system lesions** may exist as a stocking glove peripheral neuropathy or as a mononeuritis multiplex.<sup>97</sup> The latter form is probably due to small vessel vasculitis requiring high-dose prednisone.

**Pulmonary Effects.** **Pleuritis** is the most common clinical pulmonary manifestation of SLE.<sup>1,5,59,60,98</sup> Pleuritic pain in the absence of clinical signs will often respond to NSAIDs. If a rub or an effusion is present, low-dose prednisone (10-20 mg/d) is usually required. It should be emphasized that the differential diagnosis of pleuritis in SLE is large and, in addition to active SLE, includes pulmonary emboli and infection. Infection should be pursued vigorously if the patient has risk factors (e.g., on 20 mg/d of prednisone or an immunosuppressive drug). Lupus lung disease does not produce cavities or large pleural effusions. Any deviation from this radiographic picture should be aggressively investigated. Patients with the lupus anticoagulant or other known risk factors for thrombosis should have pulmonary emboli excluded.

Clinically, prognostically, and therapeutically, **pneumonitis** and **pulmonary hemorrhage** are similar.<sup>98,99</sup> The effective therapy for diffuse inflammatory pulmonary infiltrates is not known, as is evident from the 50 percent mortality reported with this process.<sup>98</sup> Certainly excellent critical care and exclusion of other causes are the first steps. Aggressive therapy (60-100 mg/d of prednisone or equivalent in divided doses intravenously) is warranted. A shock-lung-like picture develops in many patients, probably secondary to leaky

capillaries. The body's limited capacity to heal such lesions quickly, despite control of the inflammation, is probably the factor that most heavily determines survival.

**Pulmonary fibrosis** is also known as the shrinking lung syndrome. This subacute process often occurs in the absence of multi-organ inflammation and only becomes evident once restriction is at least moderately severe.<sup>100</sup> Whether the patient has active pulmonary inflammation is difficult to ascertain as large studies on the utility of bronchoalveolar lavage, gallium scanning of the lungs, and other techniques have not been performed. In clinical practice, if other non-lupus causes can be excluded, a several month trial of 40-60 mg/d of prednisone followed by pulmonary function testing will demonstrate whether a reversible component is present.

Symptoms from **pulmonary hypertension** are a late development and are usually unresponsive to conventional therapy with vasodilators.<sup>101-104</sup> Still, a right-heart catheterization to monitor empiric therapeutic trials is reasonable and is offered by tertiary medical centers.<sup>103</sup> Prednisone or immunosuppressive drugs appear to have little or no role, as the disease process -- at least at the time of detection -- is a bland vascular one. Rarely, pulmonary hypertension is a consequence of severe interstitial disease.<sup>101</sup> The benefit of long-term anticoagulation to prevent secondary thromboembolism has not been established.

**Cardiac Manifestations.** **Pericarditis** promptly responds in most cases to low doses of prednisone (10-20 mg/d). Physicians may use NSAID-like indomethacin 50 mg tid but usually in an effort to reduce rather than eliminate corticosteroids.<sup>61</sup>

**Myocarditis** is a potentially life-threatening complication that demands hospitalization and intravenous high-dose prednisone.<sup>62</sup> Intensive care unit monitoring may be needed for critically ill patients in tenuous fluid balance. While the diagnosis of myocarditis secondary to SLE is usually clear-cut on serologic and clinical grounds, the differential diagnosis needs careful examination. Whether right-heart catheterization and myocardial biopsy are needed must be decided on an individual basis.<sup>105</sup>

**Libman-Sacks endocarditis** is usually clinically silent but can cause hemodynamically important valvular dysfunction.<sup>106-109</sup> In recent times, mitral valve disease has been the most common but any valve can be affected.<sup>109</sup> The dysfunction is the result of previous inflammation or thrombus formation around the valve.<sup>109</sup> Thus, the problem is mechanical rather than inflammatory and, if severe, demands a mechanical solution (i.e., valve replacement).<sup>109</sup> Anti-inflammatory or immunosuppressive therapy is not indicated for valvular dysfunction alone. Libman-Sacks endocarditis can be a site for massive thrombosis and subsequent emboli -- especially in patients with the lupus anticoagulant.<sup>107,109</sup> Any valvular abnormality can also provide a nidus for developing bacterial endocarditis.

**Coronary artery disease** is most commonly second-



ary to atherosclerosis, which can be accelerated by prednisone use.<sup>110-112</sup> Vasculitis of the coronary arteries is rare.<sup>62</sup>

**Hematologic Manifestations.** **Thrombocytopenia** is the most commonly treated hematologic manifestation of SLE.<sup>113-122</sup> The intensity of treatment must match the severity of the problem. Platelet counts of 50,000/mm<sup>3</sup> or greater, rarely are associated with clinical bleeding, and do not require treatment. Below a platelet count of 50,000, the risk of bleeding increases and treatment is usually indicated.

Though many treatments have been tried (Table 5), prednisone is still the standard.<sup>113-122</sup> Initiated at 40-80 mg/d in divided doses, prednisone may not improve the platelet count for ten to fourteen days. When such a wait could be life-threatening, intravenous gammaglobulin can be added, as that therapy usually raises the platelet count within one to three days.<sup>118</sup> Since the effect is not long-standing, adjunctive use of prednisone is indicated.

While most patients will respond initially to high-dose prednisone, many experience exacerbations as the prednisone is tapered. The toxicity of high-dose prednisone makes chronic therapy intolerable and has, therefore, prompted the search for the alternatives listed in Table 5.<sup>113-115</sup> Each therapy has its advocates and detractors. The lack of comparative trials fuels and maintains this debate.

**Hemolytic anemia** can be a life-threatening emergency.<sup>122,123</sup> Rapid declines in hematocrits from 40 to 13 percent can occur in a matter of days. Patients with such severe hemolysis need urgent admission and immediate treatment with high-dose prednisone (60-100 mg/d in divided doses given intravenously). Transfusion can be difficult but should be provided whenever the anemia is life-threatening. Tapering is not attempted until the hematocrit, peripheral blood smear, and reticulocyte count demonstrate that the hemolysis has stopped and that the red blood cells have been replenished.

One of the murkiest issues in clinical lupus today is the management of a **lupus anticoagulant**.<sup>124-130</sup> Several recent studies have helped clarify some of the answers. First, only patients who have both a lupus anticoagulant and who have had a thrombotic event are candidates for warfarin therapy. Though the lupus anticoagulant in its many different forms is present in

7 to 30 percent of all patients, the risk of thrombosis to any one patient is low; approximately three thrombotic events occur every 100 patient years.<sup>131</sup> Thus, the treatment of all patients with the lupus anticoagulant would not be cost-effective and the risk of anticoagulation would exceed the benefits. Even for patients with a history of thrombotic events and a lupus anticoagulant, therapy is controversial. Cases of repeated thrombotic events while on aspirin have prompted the use of warfarin, though the benefits of such therapy have not been established in controlled clinical trials. It is hoped that future studies will help identify more precisely the subgroup of patients at risk and the optimal therapy.

**Abdominal Vasculitis.** Mesenteric ischemia from abdominal vasculitis is one of the most feared complications of SLE.<sup>132,133</sup> Once suspected, the treatment includes high-dose prednisone to halt the inflammatory destruction of vessels. If the clinical picture does not improve rapidly, bowel gangrene should be suspected; emergent laparotomy will be needed.<sup>132,133</sup> Despite aggressive therapy the mortality from this complication remains high.<sup>132,133</sup>

## Conclusion

Over the last three decades, advances in the treatment of lupus have transformed it from an acute and often fatal disease to a chronic illness compatible with a normal life span. The reality of lupus as a chronic disease has several therapeutic implications. First, the importance of a compassionate, understanding, and communicative physician is greater than ever. Nowadays, the effective clinician not only treats acute flares but also educates and counsels about the effects of an illness on job, marriage, children, and on almost every other dimension of a patient's life. Second, lupus as a chronic disease has demonstrated the need to reduce the toxicity of corticosteroids -- especially in terms of infections, accelerated coronary artery disease, and avascular necrosis of bone. To preserve the gains provided by corticosteroids while reducing the side effects is the chief therapeutic challenge of today. The possibilities of more selective and more effective therapies promise that the prognosis for patients with SLE will continue to improve.

## References

1. Hochberg MC, Boyd RE, Ahearn JM, Arnett FC, Bias WB, Provost TT, Stevens MB. Systemic lupus erythematosus: A review of clinico-laboratory features and immunogenetic markers in 150 patients with emphasis on demographic subsets. *Medicine* 1985; 64:285.
2. Estes D, Christian CL. The natural history of systemic lupus erythematosus by prospective analysis. *Medicine* 1971; 50:85.
3. Jonsson H, Nived O, Sturfelt G. Outcome in systemic lupus erythematosus. A prospective study of patients from a defined population. *Medicine* 1989; 68:141.
4. Studenski S, Allen NB, Caldwell DS, Rice JR, Polisson RI

**Table 5. Treatments for Thrombocytopenia**

Corticosteroids
High-dose oral
Pulse intravenous methylprednisolone
Splenectomy
Intravenous gammaglobulin
Danazol
Immunosuppressive drugs
Cyclophosphamide
Azathioprine
Chlorambucil



- Survival in systemic lupus erythematosus. A multivariate analysis of demographic factors. *Arthritis Rheum* 1987; 30:1326.
5. Harvey AM, Shulman L, Tumulty P, Conley CL, Schoenrich EH. Systemic lupus erythematosus. Review of the literature and clinical analysis of 138 cases. *Medicine* 1954; 33:291.
6. Ziff M. Diet in the treatment of rheumatoid arthritis. *Arthritis Rheum* 1983; 26:457.
7. Klipper AR, Stevens MB, Zizic TM, Hungerford DS. Ischemic necrosis of bone in systemic lupus erythematosus. *Medicine* 1976; 55:251.
8. Zizic TM, Hungerford DS, Stevens MB. Ischemic bone necrosis in systemic lupus erythematosus I. The early diagnosis of ischemic necrosis of bone. *Medicine* 1980; 59:134.
9. Hellmann DB, Petri M, Whiting-O'Keefe Q. Fatal infections in systemic lupus erythematosus. The role of opportunistic infections. *Medicine* 1987; 66:341.
10. Urowitz MB, Bookman AAM, Koehler BE, Gordon DA, Smythe HA, Orbyzlo MA. The bimodal mortality pattern of systemic lupus erythematosus. *Am J Med* 1976; 60:221.
11. Fauci AS, Dale DC, Balow JE. Glucocorticosteroid therapy. Mechanisms of action and clinical consideration. *Ann Intern Med* 1976; 84:304.
12. Axlerod L. Glucocorticoid therapy. *Medicine* 1976;55:39.
13. Ropes MW. Treatment. In: Ropes MW, ed. *Systemic Lupus Erythematosus*. Cambridge, MA: Harvard University Press. 1976; 96.
14. Garber EK, Fan PT, Bluestone R. Realistic guidelines of corticosteroid therapy in rheumatic disease. *Semin Arthritis Rheum* 1981; 9:231.
15. Urmann J, Rothfield NF. Corticosteroid treatment in systemic lupus erythematosus. *JAMA* 1977; 238:2272.
16. Albert DA, Hadler NM, Ropes MW. Does corticosteroid therapy affect the survival of patients with systemic lupus erythematosus? *Arthritis Rheum* 1979; 22:945.
17. Ackerman GL. Alternate day steroid therapy in lupus nephritis. *Ann Intern Med* 1970; 72:511.
18. Kimberly RP, Lochshin MD, Sherman RL, McDougal JS, Inman RD, Christian CL. High-dose intravenous methylprednisolone pulse therapy in systemic lupus erythematosus. *Am J Med* 1981; 70:817.
19. Kimberly RP. Pulse methylprednisolone in SLE. *Clin Rheum Dis* 1982; 8:261.
20. Bolton WK, Couser WG. Intravenous pulse methylprednisolone therapy of acute crescentic rapidly progressive glomerulonephritis. *Am J Med* 1979; 66:495.
21. Lurie DP, Kahaleh MB. Pulse corticosteroid therapy for refractory thrombocytopenia in systemic lupus erythematosus. *J Rheumatol* 1982; 9:311.
22. Powell LW, Axelsen E. Corticosteroids in liver disease. Studies on the biological conversion of prednisone to prednisolone and plasma protein binding. *Gut* 1972; 13:690.
23. Schalm SW, Summerskill WHJ, Go VLW. Prednisone for chronic active liver disease. Pharmacokinetics, including conversion to prednisolone. *Gastroenterology* 1977; 72:910.
24. Davis M, Williams R, Chakroborty J, English J, Marks V, Ideo G, Tempini S. Prednisone or prednisolone for the treatment of chronic active hepatitis? A comparison of plasma availability. *Br J Clin Pharmacol* 1978; 5:501.
25. Iglehart IW, Sutton JD, Bender JC, Shaw RA, Ziminski CM, Holt PA, Hochberg MC, Zizic TM, Engle EW, Stevens MB. Intravenous pulsed steroids in rheumatoid arthritis (RA). A comparative dose study. *J Rheumatol* 1990; 17:159.
26. Reynolds JC, Inman RD, Kimberly RP, Chuong J, Kovacs JE, Walsh MB. Acute pancreatitis in SLE. Report of 20 cases and a review of the literature. *Medicine* 1982; 61:25.
27. Hahn TJ. Corticosteroid-induced osteoporosis. *Arch Int Med* 1978; 138:882.
28. Ellman JB, Whiting-O'Keefe QE, Epstein WV. Chlorambucil treatment in systemic lupus erythematosus. *Arthritis Rheum* 1980; 23:670.
29. Balow JE, Austin HA, Muenz IR, Joyce KM, Antonovych TT, Klippel JH, Steinberg AD, Plotz PH, Decker JH. Effect of treatment on the evolution of renal abnormalities in lupus nephritis. *N Engl J Med* 1984; 311:491.
30. Austin HA, Klippel JH, Balow JE, leRiche NG, Steinberg AD, Plotz PH, Decker JL. Therapy of lupus nephritis. Controlled trial of prednisone and cytotoxic drugs. *N Engl J Med* 1986; 314:614.
31. McCune WJ, Golbus J, Zeldes W, Bohlke P, Dunna R, Fox DA. Clinical and immunologic effects of monthly administration of intravenous cyclophosphamide in severe systemic lupus erythematosus. *N Engl J Med* 1988; 318:1423.
32. Ginzler E, Sharon E, Diamond H, Kaplan D. Long-term maintenance therapy with azathioprine in systemic lupus erythematosus. *Arthritis Rheum* 1975; 18:27.
33. Barnett EV, Dornfield L, Lee DBN, Liebling MR. Long term survival of lupus nephritis patients treated with azathioprine and prednisone. *J Rheumatol* 1978; 5:275.
34. Szejnbok M, Stewart A, Diamond H, Kaplan D. Azathioprine in the treatment of systemic lupus erythematosus. A controlled study. *Arthritis Rheum* 1971; 14:639.
35. Balow JE, Austin HA, Tsokos BC, Antonovych TT, Steinberg AD, Klippel JH. Lupus nephritis (NIH Conference). *Ann Intern Med* 1987; 106:79.
36. Epstein WV. Immunologic events preceding clinical exacerbation of systemic lupus erythematosus. *Am J Med* 1973; 54:631.
37. Laitman RS, Glicklich D, Sablay LB, Grayzel AI, Barland P, Bank N. Effect of long-term normalization of serum complement levels on the course of lupus nephritis. *Am J Med* 1989; 87:131.
38. Wallace DJ, Goldfinger D, Klinenberg JR. Plasmapheresis in lupus nephritis. A controlled study. *Arthritis Rheum* 1985; 28:546.
39. Strober S, Farinas C, Field EH, Solovera JJ, Kibero BA, Myers BD, Hoppe RT. Lupus nephritis after total lymphoid irradiation. Persistent improvement and reduction of steroid therapy. *Ann Intern Med* 1987; 107:689.
40. Lloyd W, Schur PH. Immune complexes, complement, and anti-DNA in exacerbations of systemic lupus erythematosus. *Medicine* 1981; 60:208.
41. Swaak JG, Groenwold J, Aarden LA, Statius Van PS LW, Feltkamp TEW. Prognostic value of anti-dsDNA in SLE. *Ann Rheum Dis* 1982; 41:388.
42. Ginzler E, Diamond HS, Kaplan D, Weiner M, Schlesinger M, Seleznick M. Computer analysis of factors influencing frequency of infection in systemic lupus erythematosus. *Arthritis Rheum* 1978; 21:37.
43. Nived O, Sturfelt G, Wollheim F. Systemic lupus erythematosus and infection: A controlled and prospective study including an epidemiologic group. *Q J Med* 1985; 55:271.
44. Rosner S, Ginzler EM, Diamond HS, Weiner M et al. A multicenter study of outcome in systemic lupus erythematosus II. Causes of death. *Arthritis Rheum* 1982; 25:612.
45. Kimberly RP, Bowden RE, Keiser HR, Plotz PH. Elevated urinary prostaglandins and the effects of aspirin on renal function in lupus erythematosus. *Ann Intern Med* 1978; 89:336.
46. Weinstein A. Drug-induced systemic lupus erythematosus. *Prog Clin Immunology* 1980; 4:1.
47. Callen JP, Klein J. Subacute cutaneous lupus erythematosus. Clinical, serologic, immunogenetic, and therapeutic considerations in seventy-two patients. *Arthritis Rheum* 1988; 31:1007.
48. Prystowsky SD, Herndon JH, Galliam JN. Chronic cutaneous lupus erythematosus (DLE) - a clinical and laboratory investigation of 80 patients. *Medicine* 1975; 55:183.
49. Tuffanelli D, Dubois E. Cutaneous manifestations of systemic lupus erythematosus. *Arch Dermatol* 1964; 90:377.
50. Hall RP, Lawley TJ, Smith HR, Katz SI. Bullous eruption of systemic lupus erythematosus. *Ann Intern Med* 1982; 97:165.
51. Dubois EL. Antimalarials in the management of discoid and systemic lupus erythematosus. *Semin Arthritis Rheum* 1978; 8:33.
52. Easterbrook M. Ocular effects and safety of antimalarial agents. *Am J Med* 1988; 85(suppl 4A):23.
53. Finbloom DN, Silver K, Newsome DA, Gunkel R. Comparison of hydroxychloroquine and chloroquine use and the development of retinal toxicity. *J Rheumatol* 1985; 12:692.
54. The Canadian Hydroxychloroquine Study Group. A randomized study of the effect of withdrawing hydroxychloroquine



- sulfate in systemic lupus erythematosus. *N Engl J Med* 1991; 324:150.
55. Lindskov R, Reymann R. Dapsone in the treatment of cutaneous lupus erythematosus. *Dermatologica* 1986; 172:214.
  56. McCormack LS, Elgart ML, Turner MLC. Annular subacute cutaneous lupus erythematosus responsive to dapsone. *J Am Acad Dermatol* 1984; 11:397.
  57. Ruzika T, Goerz G. Dapsone in the treatment of lupus erythematosus. *Br J Derm* 1981; 104:53.
  58. Graham DY, Smith JL. Aspirin and the stomach. *Ann Intern Med* 1986; 104:390.
  59. Segal AM, Calabrese LH, Ahmad M, Tubbs RR, White CS. The pulmonary manifestations of systemic lupus erythematosus. *Semin Arthritis Rheum* 1985; 14:202.
  60. Winslow WA, Ploss LN, Loitman B. Pleuritis in systemic lupus erythematosus. Its importance as an early manifestation in diagnosis. *Ann Intern Med* 1958; 49:70.
  61. Mandell BF. Cardiovascular involvement in systemic lupus erythematosus. *Semin Arthritis Rheum* 1987; 17:126.
  62. Borenstein DG, Fye B, Arnett FC, Stevens MB. The myocarditis of systemic lupus erythematosus. Association with myositis. *Ann Intern Med* 1978; 89:619.
  63. Ginzler EM, Diamond HS, Weiner M, Schlesinger M et al. A multicenter study of outcome in systemic lupus erythematosus. I. Entry variables as predictors of prognosis. *Arthritis Rheum* 1982; 25:601.
  64. Baldwin DS, Lowenstein J, Rothfield NF, Gallo G, McClusky RT. The clinical course of the proliferative and membranous forms of lupus nephritis. *Ann Intern Med* 1970; 73:929.
  65. Petri M, Bockenstedt L, Colman J, Whiting-O'Keefe Q, Fritz JG, Sabastian A, Hellmann DB. Serial assessment of glomerular filtration rate in lupus nephropathy. *Kidney Int* 1988; 34:832.
  66. Coplon NS, Diskin CJ, Pattersen J, Swenson RS. The long-term clinical course of systemic lupus erythematosus in end-stage renal disease. *N Engl J Med* 1983; 308:186.
  67. Strober S, Field E, Hoppe RT, Kotzin BL et al. Treatment of intractable lupus nephritis with total lymphoid irradiation. *Ann Intern Med* 1985; 102:450.
  68. Felson DT, Anderson J. Evidence for the superiority of immunosuppressive drugs and prednisone over prednisone alone in lupus nephritis. *N Engl J Med* 1984; 12:1528.
  69. Shemesh O, Golbetz H, Kriss JP, Myers BD. *Kidney Int* 1985; 28:830.
  70. Rodby RA, Korbet SM, Lewis EJ. Persistence of clinical and serologic activity in patients with systemic lupus erythematosus undergoing peritoneal dialysis. *Am J Med* 1987; 83:613.
  71. Balow JE, Austin HA III, Tsokos GC, Antonovych TT, Steinberg AD, Klippel JH. Lupus nephritis. *Ann Intern Med* 1987; 106:79.
  72. Keane WF, Anderson S, Aurell M, de Seeuw D et al. Angiotensin converting enzyme inhibitors and progressive renal insufficiency. Current experience and future directions. *Ann Intern Med* 1989; 111:504.
  73. Fries JF, Porta J, Liang MH. Marginal benefit of renal biopsy in systemic lupus erythematosus. *Arch Intern Med* 1978; 138:1386.
  74. Appel GB, Silva FG, Pirani CL, Meltzer JI, Estes D. Renal involvement in systemic lupus erythematosus (SLE). A study of 56 patients emphasizing histologic classification. *Medicine* 1978; 57: 371.
  75. Dinant HJ, Decker JL, Klippel JH, Balow JE et al. Alternative modes of cyclophosphamide and azathioprine therapy in lupus nephritis. *Ann Intern Med* 1982; 96(Part I):728.
  76. Whiting-O'Keefe Q, Riccardi J, Henke JE, Shearn MA, Hopper J Jr., Epstein WV. Recognition of information in renal biopsies of patients with lupus nephritis. *Ann Intern Med* 1982; 96(Part I):723.
  77. Appel GB, Williams GS, Heltzer JI, Pirani CL. Renal vein thrombosis, nephrotic syndrome, and systemic lupus erythematosus. An association in four cases. *Ann Intern Med* 1966; 85:310.
  78. Donadio JV Jr., Burgess JH, Holley KE. Membranous lupus nephropathy. A clinicopathologic study. *Medicine* 1977; 56:527.
  79. Cathcart ES, Scheinberg MA, Idelson BA, Couser WG. Beneficial effects of methylprednisolone "pulse" therapy in diffuse proliferative lupus nephritis. *Lancet* 1976; 1:163.
  80. Barnett EV, Dornfeld L, Lee DBN, Liebling MR. Long-term survival of lupus nephritis patients treated with azathioprine and prednisone. *J Rheumatol* 1978; 5:275.
  81. Plotz PH, Klippel JH, Decker JL, Granman D, Wolff H, Brown BS, Rutt G. Bladder complications in patients receiving cyclophosphamide for systemic lupus erythematosus or rheumatoid arthritis. *Ann Int Med* 1979; 91:221.
  82. Bradley JD, Brandt KD, Katz BP. Infectious complications of cyclophosphamide treatment for vasculitis. *Arthritis Rheum* 1989; 32:45.
  83. Winkler A, Jackson RW, Kay DS, Mitchell E et al. High-dose intravenous cyclophosphamide treatment of systemic lupus erythematosus-associated aplastic anemia. *Arthritis Rheum* 1988; 31:693.
  84. Gibbons RB, Westerman E. Acute nonlymphocytic leukemia following short-term intermittent, intravenous cyclophosphamide treatment of lupus nephritis. *Arthritis Rheum* 1988; 31:1552.
  85. Roubenoff R, Drew H, Moyer M, Petri M, Whiting-O'Keefe Q, Hellmann D. Oral cimetidine improves the accuracy and precision of creatinine clearance in lupus nephritis. *Ann Intern Med* 1990; 113:501.
  86. Feinglass EJ, Arnett FC, Dorsch CA, Zizic TM, Stevens MB. Neuropsychiatric manifestations of systemic lupus erythematosus. Diagnosis, clinical spectrum, and relationship to other features of the disease. *Medicine* 1976; 55:323.
  87. Sergeant JS, Lockshin MD, Klemperer MS, Lipsky BA. Central nervous system disease in systemic lupus erythematosus. Therapy and prognosis. *Am J Med* 1975; 58:644.
  88. Klippel JH, Zvaifler NJ. Neuropsychiatric abnormalities in systemic lupus erythematosus. *Clin Rheum Dis* 1975; 1:621.
  89. Andrianakos AA, Duffy J, Suzuki M, Sharp JT. Transverse myelopathy in systemic lupus erythematosus. *Am J Med* 1975; 83:616.
  90. Brandt KD, Lessel S. Migrainous phenomena in systemic lupus erythematosus. *Arthritis Rheum* 1978; 21:7.
  91. Isenberg DA, Meyrick-Thomas D, Snaith ML, McKernan RO, Royston JP. A study of migraine in systemic lupus erythematosus. *Ann Rheum Dis* 1982; 41:30.
  92. Johnson RT, Richardson EP. The neurological manifestations of systemic lupus erythematosus. A clinical-pathologic study of 24 cases and review of the literature. *Medicine* 1968; 47:337.
  93. Bluestein HG, Williams GW, Steinberg AD. Cerebrospinal fluid antibodies to neuronal cells. Association with neuropsychiatric manifestations of systemic lupus erythematosus. *Am J Med* 1981; 70:240.
  94. Asherson RA, Derksen RHWM, Harris EN, Bouma BN, Gharavi AE, Kater L, Hughes GRV. Chorea in systemic lupus erythematosus and "lupus-like" disease. Association with antiphospholipid antibodies. *Semin Arthritis Rheum* 1987; 16:253.
  95. Kaell AT, Shetty M, Lee BCP, Lockshin MD. The diversity of neurologic events in systemic lupus erythematosus. Prospective clinical and computed tomography classification of 82 events in 71 patients. *Arch Neurol* 1986; 43:273.
  96. Warren RW, Kredich DW. Transverse myelitis and acute central nervous system manifestations of systemic lupus erythematosus. *Arthritis Rheum* 1984; 27:1058.
  97. Hellmann DB, Laing TJ, Petri M, Whiting-O'Keefe Q, Parry GJ. Mononeuritis multiplex. The yield of the evaluation for occult rheumatic diseases. *Medicine* 1988; 67:145.
  98. Matthay RA, Schwartz MI, Petty TL, Stanford RE, Gupta RC, Sahn SA, Steigerwald JC. Pulmonary manifestations of systemic lupus erythematosus. Review of twelve cases of acute lupus pneumonitis. *Medicine* 1974; 54:397.
  99. Eagen JW, Memoli VA, Roberts JL, Matthew GR, Schwartz MM, Lewis EJ. Pulmonary hemorrhage in systemic lupus erythematosus. *Medicine* 1978; 57:545.
  100. Gold WM, Jennings DB. Pulmonary function in patients with systemic lupus erythematosus. *Am Rev Respir Dis* 1966; 93:556.
  101. Simonson JS, Schiller NB, Petri M, Hellmann DB. Pulmonary



- hypertension in systemic lupus erythematosus. *J Rheumatol* 1989; 16:7918.
102. Rich S, Dantzker DR, Ayres SM, Bergofsky EH et al. Primary pulmonary hypertension. A national prospective study. *Ann Intern Med* 1987; 107:216.
  103. Rich S, Brundage BH. High-dose calcium channel-blocking therapy for primary pulmonary hypertension: Evidence for long-term reduction in pulmonary arterial pressure and regression of right ventricle hypertrophy. *Circulation* 1987; 76:135.
  104. Rubin LJ, Mendoza J, Hood M, McGoon M, Barst R, Williams WB, Diehl JH, Crow J, Long W. Treatment of primary pulmonary hypertension with continuous intravenous prostacyclin (Epoprostenol). Results of a randomized trial. *Ann Intern Med* 1990; 112:487.
  105. Fairfax MJ, Osborn TG, Williams GA, Tsai CC, Moore TL. Endomyocardial biopsy in patients with systemic lupus erythematosus. *J Rheumatol* 1988; 15:593.
  106. Straaton KV, Chatham WW, Reveille JD, Koopman WJ, Smith SH. Clinically significant valvular heart disease in systemic lupus erythematosus. *Am J Med* 1988; 85:645.
  107. Ford PM, Ford SE, Lillcrap DP. Association of lupus anticoagulant with severe valvular heart disease in systemic lupus erythematosus. *J Rheumatol* 1988; 15:597.
  108. Galve E, Candell-Riera J, Pigrau C, Permanyer-Miralda G et al. Prevalence, morphologic types, and evolution of cardiac valvular disease in systemic lupus erythematosus. *N Engl J Med* 1988; 319:817.
  109. Bilazarian SD, Baughman KL, Hutchins GM, Hellmann DB. Systemic lupus erythematosus presenting as acute severe mitral regurgitation. *Am J Med* 1990; 88:1-60.
  110. Bulkley BH, Roberts WC. The heart in systemic lupus erythematosus and the changes induced in it by corticosteroid therapy. A study of 36 necropsy patients. *Am J Med* 1975; 58:243.
  111. Meller J, Conde CA, Deppisch LM, Donoso E, Dack S. Myocardial infarction due to coronary atherosclerosis in three young adults with systemic lupus erythematosus. *Am J Card* 1975; 35:309.
  112. Spiera H, Rothenberg RR. Myocardial infarction in four young patients with SLE. *J Rheumatol* 1983; 10:464.
  113. McMillan R. Chronic idiopathic thrombocytopenic purpura. *N Engl J Med* 1981; 304:1135.
  114. Ahn YS, Rocha R, Mylvaganam R, Garcia R et al. Long-term danazol therapy in autoimmune thrombocytopenia. Unmaintained remission and age-dependent response in women. *Ann Intern Med* 1989; 111:723.
  115. Goebel KM, Gassel WD, Goebel FD. Evaluation of azathioprine in autoimmune thrombocytopenia and lupus erythematosus. *Scand J Haemat* 1973; 10:28.
  116. Best WR, Darling DR. A critical look at the splenectomy SLE controversy. *Med Clin North Am* 1962; 46:19.
  117. Schreiber AD, Chien P, Tomaski A, Cines DB. Effect of danazol in immune thrombocytopenic purpura. *N Engl J Med* 1987; 316:503.
  118. Fehr J, Hofmann V, Kappeler U. Transient reversal of thrombocytopenia in idiopathic thrombocytopenic purpura by high-dose intravenous gamma globulin. *N Engl J Med* 1982; 306:1254.
  119. Rivero S, Alger M, Alarcon-Segovia D. Splenectomy for hemocytopenia in systemic lupus erythematosus. A controlled appraisal. *Arch Intern Med* 1979; 139:773.
  120. Hall S, McCormick JL Jr., Greipp PR, Michet CJ Jr., McKenna CH. Splenectomy does not cure the thrombocytopenia of systemic lupus erythematosus. *Ann Intern Med* 1985; 102:325.
  121. Gernsheimer T, Stratton J, Ballem PJ, Slichter SJ. Mechanisms of response to treatment in autoimmune thrombocytopenic purpura. *N Engl J Med* 1989; 320:974.
  122. Budman DR, Steinberg AD. Hematologic aspects of systemic lupus erythematosus. current concepts. *Ann Intern Med* 1977; 86:220.
  123. Meyer RJ, Hoffman R, Zanjani ED. Autoimmune hemolytic anemia and periodic pure red cell aplasia in systemic lupus erythematosus. *Am J Med* 1978; 65:341.
  124. Petri M, Rheinschmidt M, Whiting-O'Keefe Q, Hellmann D, Corash L. The frequency of lupus anticoagulant in systemic lupus erythematosus. A study of sixty consecutive patients by activated partial thromboplastin time, Russell viper venom time, and anticardiolipin level. *Ann Intern Med* 1987; 106:524.
  125. Petri M, Golbus M, Anderson R, Whiting-O'Keefe Q, Corash L, Hellmann D. Antinuclear antibody, lupus anticoagulant, and anticardiolipin antibody in women with idiopathic habitual abortion. A controlled, prospective study of forty-four women. *Arthritis Rheum* 1987; 30:601.
  126. Harris EN, Asherson RA, Hughes GRV. Antiphospholipid antibodies - autoantibodies with a difference. *Ann Rev Med* 1988; 39:261.
  127. Fishstein DI. Lupus anticoagulant, thrombosis, and fetal loss. *N Engl J Med* 1985; 313:1348.
  128. Branch DW, Scott JR, Kochenour NK, Hershgold E. Obstetric complications associated with the lupus anticoagulant. *N Engl J Med* 1985; 313:1322.
  129. Lie JT. Vasculopathy in the antiphospholipid syndrome. Thrombosis or vasculitis, or both? *J Rheumatol* 1989; 16:713.
  130. Kalunian KC, Peter JB, Middlekauff HR, Ando DG et al. Clinical significance of a single test for anti-cardiolipin antibodies in patients with systemic lupus erythematosus. *Am J Med* 1988; 85:602.
  131. Petri M, Hochberg M, Hellmann D, Corash L, Bell W, Goldman D. The association of the lupus anticoagulant with thrombotic events in systemic lupus erythematosus: A prospective study. *Arthritis Rheum* 1990; 33:S11.
  132. Zizic TM, Shulman LE, Stevens MB. Colonic perforations in systemic lupus erythematosus. *Medicine* 1975; 54:411.
  133. Zizic TM, Classen JN, Stevens MB. Acute abdominal complications of systemic lupus erythematosus and polyarteritis nodosa. *Am J Med* 1982; 73:525.

## We Build Beautiful Sunlit Home Additions



FOUR SEASONS GREENHOUSES  
Design & Remodeling Centers

Sunspace Design Studio, Inc.

(301) 882-6200

WHIC 16069

## Hotline Numbers for Impaired Professionals

Physicians -- 727-0120

Dentists -- 964-2275

Attorneys -- 685-7878

Pharmacists -- 727-0746

Emergency Psychiatric Beds  
800-492-0610

---

# ***The Personality Disorder Treatment Program of Sheppard Pratt Hospital***

Very often, specialized inpatient evaluation and treatment is a critical step in the effective care of a borderline patient.

The Personality Disorder Treatment Program at Sheppard Pratt offers a combination of services that may help to untangle difficult clinical questions and facilitate your patient's continued outpatient treatment.

We offer:

- ☐ Short-term and intermediate-term specialized inpatient treatment
- ☐ Extended-term intensive inpatient treatment
- ☐ Comprehensive diagnostic evaluation
- ☐ Psychotherapy and psychopharmacology consultation
- ☐ Intensive individual and group psychotherapy provided by our staff of psychiatrists and psychologists
- ☐ Long-term treatment planning

If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Adult Admissions Office at:

(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ *Sheppard Pratt*  
A not-for-profit health system

---



---

# SLE: Management Overview

---

Joan D. Sutton RN, MSN

---

*Ms. Sutton is Instructor in Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD.*

---

*Patients with systemic lupus erythematosus can often benefit from cooperative and collaborative interventions prescribed by both physicians and other arthritis health care professionals.*

---

Over the last twenty years, rheumatology has emerged as a primary area of interest for many health professionals including nurses, physical and occupational therapists, social workers, and specialists from a variety of other disciplines. The Arthritis Health Professions Association (AHPA), a professional section of the National Arthritis Foundation, is a multidisciplinary organization with approximately 2,000 members from more than fourteen disciplines.

Patients with systemic lupus erythematosus (SLE) often benefit from the cooperative and collaborative interventions prescribed by physicians and other arthritis health care professionals. The complexity of the illness, varying among individuals and within the same individual over time, precludes a single formula for meeting patients' needs. The long-term management of patients with SLE requires not only drug therapy but also selective interventions by multiple health professionals.

## Management

**General Features.** Constitutional symptoms (fatigue, fever, and weight loss) may be early manifestations of SLE and may occur periodically during the course of the disease. In addition to being a frequent and consistent complaint, fatigue occurs in the majority of patients experiencing a flare in their disease process.<sup>1</sup> Factors that contribute to the severity and duration of fatigue may include physical and emotional stress, decreased self-concept, decreased performance of daily activities, reduced sexual activity, and poor nutritional and sleeping habits.<sup>2</sup> Since corticosteroid therapy is effective in minimizing fatigue and in improving a patient's sense of well-being, compliance with the prescribed medication regimen is essential. In addition, the patient and his or her family should be instructed in principles of energy conservation such as pacing activities, planning and organizing priorities, and balancing normal activities with periods of rest.<sup>2</sup> Effective coping strategies may include the use of relaxation techniques, recreational activity, and open communications with significant others.

Emotional factors are equally as important as physical ones, in that emotional factors may play a role in triggering an acute attack. Emotional, psychosocial issues may include initial depression and grief, changes in body image, loss of control, fear of the unknown, increasing medical bills, and employment concerns.<sup>3</sup>

Recently, many studies have been conducted in an effort to further define disability, and the psychosocial and emotional concerns of the patient with lupus. In one study,<sup>4</sup> 106 ambulatory outpatients with SLE completed the Stanford Health Assessment Questionnaire (HAQ) and the Psychosocial Adjustment to Illness Scale (PAIS). Mean HAQ disability, pain, and global assessment scores indicated a mild degree of impairment, whereas correlations were observed between increased disability, increased pain, worsened global assessment, and poor psychosocial adjustment across all domains of the PAIS. These data suggest that functional and psychosocial impairment are present in patients with SLE.

In a second study,<sup>5</sup> the physical manifestations of disease activity and health status of forty-nine patients with SLE were studied. Each patient completed the Arthritis Impact Measurement Scale (AIMS) and physical features were documented by a Clinical Activity Index (CAI). Results from this study showed a significant correlation between health status and disease activity.

A third study<sup>6</sup> reported on the social functioning of 114 women with SLE. Results showed that social difficulties worsened with disease exacerbations, drug reactions, and delays in diagnosis. The study also showed that SLE was not a barrier to marriage nor a primary cause of divorce. The conclusion in this and other studies was that patients with SLE can function well socially, but that it is also important for health care providers to be alert to problems and to render support when needed.

Fever is present in approximately 90 percent of patients with SLE,<sup>1</sup> and may occur periodically throughout the course of the disease or as a result of infection. Weight loss, present in about 85 percent of patients being diagnosed, and during periods of exacerbation,<sup>1</sup> may necessitate specific dietary instruction. Dietary counseling may also be necessary for those patients experiencing weight gain (often with corticosteroids) and those with gastrointestinal disorders and food intolerances.

**Musculoskeletal.** It is reported that approximately 95 percent of patients with SLE have arthritis or arthralgias, the most frequent manifestations of this disorder.<sup>1</sup> In addition, approximately 30 percent of patients experience myalgias, with myositis occurring less frequently.<sup>1</sup> Weakness and muscle atrophy are relatively frequent and may occur secondarily to the disease process or as sequelae to corticosteroid therapy. Steroid myopathy is characterized by symmetrical weakness in the lower proximal muscles, progressing to the proximal upper extremity muscles. Rarely is the distal musculature involved. Generally, steroid myopathy is insidious, with

the first symptom being difficulty in ascending stairs or rising from a chair.

When musculoskeletal manifestations are apparent, it is advisable for patients to be instructed in an exercise program, preferably by a physical therapist. Permanent structural deformities rarely occur in SLE, but transient and recurrent impairment in locomotor function can occur.<sup>7</sup> A physical therapist can evaluate the musculoskeletal system by assessing such factors as range of motion, muscle strength, gait, mobility, functional ability, and the need for special footwear and mobility/assistive devices.<sup>8</sup> An exercise program may be therapeutic, recreational, or a combination thereof. Therapeutic exercise may include strengthening (i.e., isotonic, isometric), and range of motion (ROM) exercises. Suitable recreational exercises include walking, swimming, bicycling, light racquet games, and dancing. Generally, patients with musculoskeletal complaints should avoid contact sports, activities that cause impact to the joints, and highly competitive team sports.<sup>9</sup> A pilot study exploring the effects of aerobic conditioning in SLE patients has been conducted. After an eight-week aerobic conditioning program, twenty-three patients with SLE increased their aerobic capacity by 19 percent compared to 8 percent in controls. In addition, this change correlated with decreased fatigue, measured by visual analog scales.<sup>10</sup>

Routinely, patients on steroids should be instructed in a preventive exercise program to strengthen hip and knee extensors in order to forestall steroid myopathy. With knees extended, and in a supine position, the patient exercises one leg at a time. With a stiff knee and toes pointed stiffly toward the ceiling, the patient bounces the stiff leg lightly and rapidly several inches against the surface. The number of leg bounces should increase with time.<sup>7</sup>

Additionally, occupational and physical therapists and nurses may be instrumental in helping the patient to become or remain functionally independent with the help of assistive/adaptive devices. Frequently, patients with SLE require reassurance regarding the mild nature of their musculoskeletal problems, in that serious impairment is rare.

**Dermatologic.** Abnormalities of the hair, skin, and mucous membranes are the second most common manifestations of SLE, occurring in approximately 85 percent of patients.<sup>1</sup> Alopecia (hair loss) is one of the most common cutaneous signs of SLE. Alopecia may be scarring or nonscarring. Diffuse nonscarring alopecia occurs most frequently during the acute exacerbations of the disease.<sup>11</sup> Patients should be reassured that generally, hair loss is not permanent. However, in about 20 percent of patients, hair loss is so diffuse that the purchasing of a hairpiece becomes necessary.<sup>1</sup>

Skin lesions and photosensitivity are common in patients with SLE. Photosensitivity occurs in approximately one-third of patients with SLE and may be associated with arthralgias, fever, and other systemic



manifestations.<sup>3</sup> Photosensitive patients should be advised (1) to avoid direct sun exposure, particularly between 10:00 am and 4:00 pm; (2) to wear protective clothing such as wide-brimmed hats and long sleeves; and (3) to apply sunscreens and lip protectors with a sunscreen protective factor (SPF) of fifteen or more. Sunscreens should be applied thirty minutes before sun exposure and reapplied after bathing or swimming.<sup>11</sup>

Patients should be advised that there is more reflection of ultraviolet rays near water and snow, and that glass, such as car windows, may provide little protection.<sup>3</sup> The hospitalized patient with SLE may require a bed away from the window.

Fluorescent lamps and sunlamps constitute other sources of ultraviolet (UV) light. Fluorescent light may cause or exacerbate lupus rashes or other symptoms. Reduction of UV emissions may be accomplished by the use of a commercially available shield.<sup>12</sup>

Caution should be used when trying any new over-the-counter preparations, in that hair dyes, permanent wave solutions, skin creams, and make-up may aggravate or cause skin eruptions. It is recommended that patients do a patch test on the inside of the forearm or back of the ear before applying topical preparations to larger areas.<sup>3</sup> Likewise, caution should be employed when using over-the-counter medications.

Mucosal ulcers are common in patients with SLE. These ulcerations are generally found on the hard or soft palate and are generally asymptomatic. However, they may cause pain when patients eat spicy foods. Xylocaine or a local anesthetic may help to alleviate this discomfort.

### Special Problems

*Ischemic Necrosis of Bone.* One of the most disabling complications of SLE is ischemic necrosis of bone, also known as osteonecrosis or aseptic and avascular necrosis. Ischemic necrosis, most frequently involving the femoral heads, reflects an alteration in the blood supply and increased intramarrow pressure at the involved sites. It should be noted that avascular necrosis rarely occurs in SLE patients who are not receiving corticosteroids.<sup>13</sup>

Treatment in the early phases (Stages I and II) of osteonecrosis is aimed at promoting revascularization and prevention of collapse. Nonsurgical treatment includes the use of nonsteroidal anti-inflammatory drugs (NSAIDs) and the use of a cane or crutches. The results of this conservative approach have been disappointing and, consequently, core decompression is recommended as an early intervention. Osteotomies have also been used to prevent collapse of the femoral head. Results have been variable and postoperative management includes crutch-walking for six to twelve months. Finally, a total joint replacement may be indicated for Stages III and IV in which advanced structural changes have already occurred. Risks from this proce-

dures include dislocation, pulmonary embolism, infection, and loosening of the prosthesis. Assistive and/or ambulatory devices may be required, at least initially, for patients having undergone these procedures.

*Osteoporosis.* It is reported that osteoporosis is perhaps the most common and potentially devastating effect of corticosteroid therapy. Patients receiving steroids develop negative calcium balance and approximately 40 percent develop clinically significant osteoporosis.<sup>14</sup> Bone studies from patients undergoing prolonged treatment with glucocorticoids have shown decreased rates of bone formation and increased rates of bone resorption. Bone loss characteristically involves trabecular bone in the ribs, vertebrae, and distal radius; consequently, rib fractures and vertebral compression fractures of the thoracic and lumbar spine are common in SLE patients treated with corticosteroids.<sup>14</sup>

Treatment of symptomatic osteoporosis has had limited success, and it is suggested that prevention is a more useful approach in persons at high risk. Preventive measures may include regular exercise against gravity (e.g., walking, tennis, and exercise classes), and an adequate daily intake of calcium and Vitamin D. Daily calcium supplementation may be indicated for patients with SLE, particularly for those women who are postmenopausal. It is also suggested that cyclical estrogen replacement is the most effective preventive measure in preventing osteoporosis.<sup>15</sup>

Treatment of symptomatic osteoporosis should include the aforementioned interventions, and consideration should be given to the use of calcitonin<sup>16</sup> and fluorides.<sup>17</sup> In addition, lupus patients with vertebral compression may require the use of a back brace, bed board, or ambulatory aids.

*Education.* The relapsing and remitting clinical course of SLE in any given individual requires attention to both the acute and chronic aspects of this disease. In all phases of the disease, education is an extremely important aspect of management. Educational needs may be most important at the time of diagnosis, but should be realized throughout the disease process. Prior to implementing an educational program, determination of the patient's level of understanding and of his or her fears and concerns must be made.

Education relative to the disease process may include information regarding signs and symptoms, exacerbations and remissions, laboratory data, prognosis, psychosocial implications and information regarding pregnancy for female patients of childbearing age. Specific treatment goals and modalities with a rationale for each should be included in the educational program.

Excellent educational resource materials are available for patients.<sup>18</sup> Some may be obtained from The Lupus Foundation, the National Institutes of Health's Arthritis Information Clearinghouse, and the National Arthritis Foundation. Locally, information may be obtained from the Maryland Chapter of both the Lupus and the Arthritis Foundation. Discussion and support



groups for patients, their families, and their friends are also sponsored by these organizations.

### Conclusion

Nurses and arthritis health professionals have unique and specialized knowledge and expertise which may serve to complement and supplement that of the physician. The short-term and long-term management of patients with SLE may optimally be achieved by the involvement of a variety of health professionals capable of addressing many of the nonpharmacologic needs of this population as well as monitoring drug therapy.

### References

1. Rothfield N. Systemic lupus erythematosus: Clinical aspects and treatment. In: McCarty D, ed. *Arthritis and Allied Conditions*. 11th Edition. Philadelphia: Lea & Febiger 1989; 1022.
2. Ziegler GC. Systemic lupus erythematosus and systemic sclerosis. *Nurse Clin North Am* 1984; 19:673.
3. Nass T. *Lupus Erythematosus: A Handbook for Nurses*. Lupus Society of Wisconsin, 1988.
4. Hochberg MC, Sutton JD. Physical disability and psycho-social dysfunction in systemic lupus erythematosus. *J Rheumatol* 1988; 15:959.
5. Joyce K, Berkebile C, Hastings C, Yarboro C, Yocum D. Health status and disease activity in systemic lupus erythematosus. *Arthritis Care and Research* 1989; 2:65.
6. Stein H, Walters K, Dillon A, Schulzer M. Systemic lupus erythematosus - A medical and social profile. *J Rheumatol* 1986; 13:570.
7. Sutton JD, Navarro A, Stevens MB. Systemic lupus erythematosus XI: Nonpharmacological management. *Md State Med J* 1984; 33:469.
8. Pigg JS. Role of nursing and allied health professionals. In: McCarty D, ed. *Arthritis and Allied Conditions*. 11th Edition. Philadelphia: Lea & Febiger 1989; 783.
9. Banwell BF. Exercise and mobility in arthritis. *Nurse Clin North Am* 1984; 19:605.
10. Robb-Nicholson LC. Effects of aerobic conditioning in lupus fatigue: A pilot study. *Brit J Med* 1989; 28:500.
11. Gilliam JM. Systemic lupus erythematosus and the skin. In: Lahita RG, ed. *Systemic Lupus Erythematosus*. New York: John Wiley & Sons. 1987; 615.
12. Schur PH. Treatment. In: Schur PH, ed. *The Clinical Management of Systemic Lupus Erythematosus*. New York: Grune & Stratton. 1983; 245.
13. Zizic TM, Marcoux C, Hungerford DS, Dansereau JV, Stevens MB. Corticosteroid therapy associated with ischemic necrosis of bone in systemic lupus erythematosus. *Am J Med* 1985; 79:596.
14. Behrens TW, Goodwin JS. Glucosteroids. In: McCarty D, ed. *Arthritis and Allied Conditions*. 11th Edition. Philadelphia: Lea & Febiger. 1989; 604.
15. NIH Consensus Conference: Osteoporosis. *JAMA* 1984; 252:799.
16. Gruber HE, Ivey JL, Baylink DJ, Matthews M, Nelp WB, Sisom K, Chesnut III CH. Long-term calcitonin therapy in postmenopausal osteoporosis. *Metabolism* 1984; 33:295.
17. Riggs BL, Seeman E, Hodgson SF, Tabes DR, O'Fallon WM: Effect of the fluoride/calcium regimen on vertebral fracture occurrence in postmenopausal osteoporosis. *N Engl J Med* 1982; 306:446.
18. Wallace DJ. Lupus resource materials for patients, physicians and medical personnel. In: Wallace DJ, Dubois EL, eds. *Dubois' Lupus Erythematosus*. 3rd Edition. Philadelphia: Lea & Febiger. 1987; 617.



**Join us in a new kind  
of partnership ...  
uniting doctors,  
lawyers, teachers,  
parents, and youth  
against drug and  
alcohol abuse.**

Become part of the Maryland Doctor/Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the war against drugs. Become part of a unique initiative in Maryland to bring doctor/ lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations  
Department at 301-539-0872,  
1-800-492-1056.**

**Doctor/Lawyer/Teacher Partnership  
Against Drugs**



# Lupus. When your body becomes its own worst enemy.



As a practicing physician you want the best possible care for your lupus patients.

The Maryland Lupus Foundation works in partnership with you to help your patients and their families cope with the physical, emotional, social, and economic effects of this serious, debilitating disease.

Whether it is through our education programs, support groups, or counseling and referral services, our sensitive staff brings your patients the latest information on lupus and helps ease the burden of the disease.

Also, our Medical Advisory Board promotes the funding of research related to lupus, facilitates the exchange of information among health professionals and collaborates with the medical community to improve the standards of diagnosis and treatment to those afflicted by lupus.

For more information on our services call (301) 337-9000

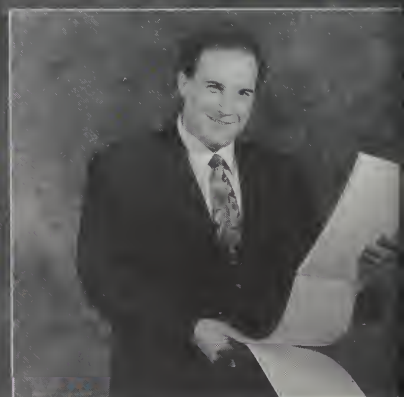
## Maryland Lupus Foundation

# "We've tried other or exist—without

*"The business of medicine has gotten so complicated, there's no way we could have continued to manage the practice without the right kind of automation. Now, with our Keystone system, the staff can respond to all our requests — patient requests, too — in no time flat. And KMS is what you'd call user friendly... everyone's happy with it."* Charles W. Kinzer, M.D.,

The KMS practice management system enables you to streamline office operations quickly and realize dramatic increases in efficiency. Time spent shuffling papers can be devoted to patient care — and growing your practice.

*"We're using their Intelligent Payment Posting module. It's saved us 16% in staff hours in one office, 25% at another. That's part of the reason we selected Keystone: efficiency. We also chose them for their flexibility, support and long-term commitment."* Benjamin L. Levin



*Benjamin L. Levin, Executive Director  
Philadelphia Eye Associates  
Philadelphia, PA*

*Charles W. Kinzer, M.D., P.A.  
Internal Medicine Associates of Annapolis  
Annapolis, MD*



## OFFICE AUTOMATION FROM KEYSTONE

# systems and realize we can't grow— our computer from Keystone."



Carol Matthews, President  
Eastern Medical Management, Inc.  
Pittsburgh, PA

"We've been with Keystone for eight years. They've always provided us with options as we've grown and done whatever it takes to keep the system up and running. Their support is worth every penny." Carol Matthews

Keystone has designed a system that allows you to start with the basics (Accounts Receivable, Billing, Practice Analysis and Electronic Claims) and add on other capabilities as you need them. KMS gives you a clear picture of your involvement with the patient — and provides you with all pertinent information instantly and automatically. Using the KMS modules receiving information from the industry and our clients are Patient Scheduling, Intelligent Payment Posting, and Credit and Collections.

"We were searching for a company sophisticated enough to support the growing demands of our company, and we found that in Keystone. The KMS Credit and Collections module allowed us to convert from a manual collections system that took forever to a computerized system that saves us 25% in manhours — without having to change our collections style one bit." Cindy Groux

"Their system ties all of our offices together, letting us keep track of everything that goes on — every facet of the practice — electronically. We feel secure that the business end is running expertly and efficiently. When I think how inaccurate we might have been before KMS, I know we couldn't survive now without it." Paul J. Killian, M.D.



Paul J. Killian, M.D.  
Mary Spece, Office Manager  
Arthritis And Rheumatic Disease Associates  
Pittsburgh, PA



Cindy Groux, Business Manager  
Eastern Medical Management, Inc.  
Cherry Hill, NJ

Keystone Medical Systems, Inc., has been providing medical office automation since 1983. We currently maintain our nationally recognized software for over 400 client practices. You'll find our costs extremely competitive and the satisfaction levels of our clients exceptionally high, owing to the quality of our training and support staff. To learn more about the benefits of KMS for your practice and to arrange a *free* office analysis, write us or call our headquarters at 717/763-1616.



*Prescription for healthier  
practice management*

645 North 12th Street, Suite 100,  
Lemoyne, PA 17043



## Treatment of Early-Stage Breast Cancer: Summary of the National Institutes of Health (NIH) Consensus Statement

**C**arcinoma of the breast is the most common cancer in women in the United States, and incidence of the disease has been increasing steadily. It is estimated that more than 1.5 million women will be diagnosed with breast cancer in the 1990s. The increased number of reported cases of breast cancer may be partly attributable to more widespread use of screening mammography. Tumors are also being detected at the smaller, more treatable stages of the disease. Of the 150,000 new patients diagnosed with invasive breast cancer in 1990, 75 to 80 percent will have early stage (clinical stage I or II) disease, and about two-thirds of these cases will not involve the axillary lymph nodes (node-negative disease).

Surgery alone was the traditional treatment for breast cancer during most of the twentieth century, and over the last decade, treatment has evolved from radical mastectomy to less extensive but equally effective modified mastectomy. Further studies have compared different approaches to more conservative equally effective surgery, including breast conservation therapy. Breast conservation therapy is a combination of surgery to remove the tumor and a small margin of unaffected tissue, removal and examination of underarm lymph nodes, and radiation treatment to the breast. The appropriate use of breast conservation therapy involves a variety of clinical, biological, and psychosocial factors.

Also in the last decade, adjuvant therapy has been the standard of care for the majority of breast cancer patients whose cancer has spread to the axillary lymph nodes. Several trials have recently shown an improvement in disease-free survival for node-negative breast cancer patients who receive adjuvant therapy. Although node-negative patients are considered to have a relatively favorable prognosis, they are still at risk for disease recurrence. About 30 percent of node-negative breast cancer patients will have disease recurrence. A plethora of potential prognostic factors to define an individual's risk of recurrence have been proposed, and their efficacy has been the subject of controversy.

To evaluate the research on these subjects, the National Cancer Institute and the National Institutes of Health's (NIH) Office of Medical Applications of Research sponsored a Consensus Development Conference on the Treatment of Early-Stage Breast Cancer on June 18-21, 1990. Based on scientific presentations and discussions from physicians, scientists, health care professionals, and the general public, a fifteen-member panel wrote a consensus statement. Following are the panel's findings:

- Breast conservation treatment is an appropriate method of primary therapy for the majority of women with Stage I and II breast cancer, and is preferable because it provides survival equivalent to total mastectomy and also preserves the breast. Total mastectomy remains an appropriate primary therapy when breast conservation is not indicated or selected. Both surgical therapies are accompanied by axillary dissection, which provides important prognostic information.
- The objective of breast conservation treatment is to obtain a

high probability of local disease control with survival at least equivalent to that obtained with total mastectomy, combined with maximal cosmetic results, and maintenance of normal function. The most widely employed treatment that achieves these goals is the combination of excision of the primary tumor with clear margins, level I-II axillary dissection, and post-operative radiation therapy to 4,500 to 5,000 centigrays with or without a boost.

- The majority of patients with node-negative breast cancer are cured by surgery or by surgery and radiation without further therapy. There is clear evidence that the rate of local and distant recurrence is decreased by both adjuvant combination cytotoxic chemotherapy and by adjuvant tamoxifen. Data from the ten randomized trials reviewed show that adjuvant systemic therapy reduces the rate of disease recurrence by about one-third. The role of these treatments in improving overall survival and other important parameters, such as quality of life, is still being defined.
- The decision to use adjuvant treatment should follow a thorough discussion with the patient regarding the approximate risk of relapse without adjuvant therapy, the expected reduction in risk with adjuvant therapy, toxicities of therapy, and its impact on quality of life. The many unanswered questions in the adjuvant systemic treatment of node-negative breast cancer make it imperative that all patients who are candidates for clinical trials be offered the opportunity to participate.
- Prognostic factors should be used to provide an estimate of risk of recurrence in women with early-stage breast cancer. Although no individual patient can be assured that she has no risk of recurrence, the majority of women will be cured with local/regional therapy.
- A useful prognostic factor has significant and independent predictive value that has been validated by clinical testing; its determination must be feasible, reproducible, and widely available with quality control; and it must be interpretable by the clinician and have therapeutic implications. Tumor size, estrogen and progesterone receptor status, nuclear grade, histologic type, and proliferative rate are useful prognostic factors, and other factors are under investigation.
- Outside of clinical trials it is reasonable not to employ adjuvant therapy in patients with tumors less than or equal to 1 centimeter in diameter because their chance of recurrence is less than 10 percent in ten years. With increasing tumor diameter, adjuvant systemic therapy is a reasonable therapeutic option.
- In patients with tumors larger than 1 centimeter in diameter, other prognostic factors should be weighed in the decision to employ adjuvant treatment. A major goal is the development of a risk profile system with sufficient accuracy and reproducibility to estimate prognosis in the individual patients.
- Future research should include determining optimal surgical and radiation techniques; refining current knowledge of chemotherapy regimens and tamoxifen therapy; developing a risk factor profile system to identify patients who could avoid systemic therapy, axillary node dissection, or radiation after breast sparing surgery without sacrificing survival; and assessing quality of life parameters in future clinical trials.

Free, single copies of the complete *NIH Consensus Statement on Treatment of Early-Stage Breast Cancer* may be ordered from the Office of Medical Applications of Research, National Institutes of Health, Building 1, Room 260, 9000 Rockville Pike, Bethesda, MD 20892 (301-496-1143).



### Treatment of Early-Stage Breast Cancer: Commentary and Counterpoint

Unlike the first two National Institutes of Health (NIH) consensus development conferences on breast cancer in July 1980 and September 1985, which were concerned with the adjuvant chemotherapy of breast cancer, this latest conference in June 1990 dealt with the treatment of early-stage breast cancer. What follows is a commentary and counterpoint to the summary findings of the conference from the point of view of a practicing medical oncologist.

There were five main questions addressed by the panel.

#### 1. What are the Roles of Mastectomy versus Breast Conservation in the Treatment of Early-Stage Breast Cancer?

The panel concluded that breast conservation treatment is an appropriate method of primary therapy for the majority of women with stage I and II breast cancer, and is preferable because it provides survival, equivalent to total mastectomy, and also preserves the breast. The complete consensus statement does point out that certain women are not candidates for breast conservation treatment, such as:

- women with multicentric breast malignant neoplasms, including those with gross multifocal disease or diffuse microcalcifications detected by mammography,
- women whose tumors are large relative to breast size, and
- women with certain pathologic and clinical features such as the presence of extensive intraductal carcinoma within and adjacent to the primary tumor, extensive lymphatic involvement, and young age (less than thirty-nine years).

The panel's opinion on the first question represents a calculated overstatement because breast conservation treatment is not commonly done nationwide and there are certain areas of the country where it is not being offered at all. I agree with the exclusion of women with certain pathologic and clinical features but feel that some women under thirty-nine years of age can be candidates for conservative treatment if their breasts are not too large or too firm. Women excluded because of certain pathologic and clinical features could be offered reconstructive surgery after a modified radical mastectomy if cosmesis is a desired goal. Nowhere in the full statement is any mention made of the risks of radiation therapy sometimes due to the overlap of radiation treatment fields, such as local radiation reaction with scar formation, as well as telangiectasis and fibrosis.

In my opinion, breast conservation treatment should not be considered the preferred method of treatment for the *majority* of women, although it is certainly appropriate in many cases after breast size, tumor size, the presence of extensive intraductal carcinoma, extensive lymphatic involvement, possible radiation reac-

tion, and the desire for reconstructive surgery have all been carefully considered.

Finally, assessment of the patient's wishes are of paramount importance. For many patients, the removal of the breast provides an important sense of security which may outweigh concerns regarding body image and sexuality.

#### 2. What are the Optimal Techniques for Breast Conservation?

The panel recommended the following techniques for breast conservation:

- a. Local excision of primary tumor with clear margins; when the margins are grossly involved with tumor, further resection is indicated.
- b. Stage I-II, axillary node dissection.
- c. Breast irradiation to 4,500-5,000 cGy with or without a boost.

I am in agreement with all the statements made regarding this question and would underscore the point regarding booster irradiation. Booster irradiation has been used in the majority of trials to date. Some of the evidence available suggests that not all patients receiving radiation therapy need to have a boost. Cooperation and input from pathologists regarding the presence of intraductal component, tumor size, and other prognostic factors should be useful in selecting those patients who do not require a boost.

#### 3. What is the Role of Adjuvant Therapy for Patients with Node-Negative Breast Cancer?

The panel's recommendation was that since there are many unanswered questions in the adjuvant systemic treatment of node-negative breast cancer, it is imperative that all patients who are candidates for clinical trials be offered the opportunity to participate. Of course, this recommendation begs the question, but is not surprising considering that only two of the thirteen members of the consensus development panel are practicing physicians. The recommendations regarding adjuvant systemic treatment for patients who are not candidates for such trials or who refuse to participate are disappointingly vague and, regrettably, do not incorporate any of the information presented in the answer to the next question.

#### 4. How should Prognostic Factors be Used in the Management of Node-Negative Breast Cancer?

The panel responded to this question by outlining the characteristics of a useful prognostic indicator, which led to the selection of the following prognostic factors:

- Tumor size
- Estrogen and progesterone receptor status
- Nuclear grade
- Histologic type
- Proliferation rate

Other factors, such as a high level of cathepsin-D are associated with an unfavorable prognosis, and data for HER-2/NEU epidermal growth factor receptor and stress-response (heat shock) proteins are of interest, but further investigation is required before reaching any conclusions about their clinical value.

When it came to estimating individual risk and making some specific recommendations based on these prognostic factors, the panel waxed vague once again. The panel clearly seemed to be reluctant to make any definitive recommendations for fear that fewer patients might enroll in clinical trials. What a remarkable pendulum shift from the *NIH Clinical Alert* of May 1988 that urged medical and surgical oncologists to consider strongly either adjuvant hormonal or cytotoxic chemotherapy in all node-negative breast cancer patients under the age of seventy-one. While most medical and surgical oncologists believed that the *Clinical Alert* recommendations were too drastic -- the absence of clear recommendations in this latest consensus statement is disappointing. This lack of recommendations is doubly confusing when one reads the third paragraph of the *NIH Consensus Summary* where it states that several trials have recently shown improvement in disease-free survival for node-negative breast cancer patients who receive adjuvant chemotherapy.

## 5. What are the Directions for Future Research?

In response to this last question, the panel made several recommendations including the refinement of existing prognostic factors in order to identify subgroups of patients who could be treated more specifically, such as with surgical excision without radiation or by omitting axillary node dissection. The panel suggested plans for improvements in chemotherapy regimens, and recommended that studies be done to determine the optimal margins for local excision of a tumor, as well as studies to determine the need for booster irradiation. I fully concur and would encourage readers to obtain a copy of the complete *NIH Consensus Statement*.

*Those of us practicing medicine in the State of Maryland and throughout the nation are grateful to NIH for sponsoring these consensus development conferences that bring together world experts to focus on special problems in clinically important diseases. These conferences certainly need to be continued and I would urge that a greater number of physicians in clinical practice be added to these panels in order to provide a more complete representation of physicians who must deal with these issues.*

EUGENE P. LIBRE MD, FACP

Dr. Libre is a practicing medical oncologist in Kensington, MD and is associated with the Cancer Center at Suburban Hospital in Bethesda, MD. Reprints: Dr. Libre, Dept. of Medical Education, Suburban Hospital, 8600 Old Georgetown Rd., Bethesda, MD 20814. ■

## Board of Physician Quality Assurance Actions

In the Matter of  
Josette W. Bianchine MD  
Before the  
Maryland Board of  
Physician Quality Assurance

### Consent Order

On August 27, 1990, the State Board of Physician Quality Assurance (the Board), pursuant to its authority under *Md. Health Occ. Code Ann.*, §14-504, charged Josette W. Bianchine MD (the Respondent), under *Md. Health Occ. Code Ann.* §14-504(a)(1) (1989 Cum. Supp.), in charges Under the Maryland Medical Practice Act.

The pertinent provisions of §14-504 provide:

(a) Subject to the hearing provisions of §14-505 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:

(1) Fraudulently or deceptively obtains or attempts to obtain a license for the applicant or licensee or for another.

On November 7, 1990, a settlement conference was held. Present were John F. Strahan MD, the Board's Settlement Officer; J. Andrew Sumner MD, Board Member; Barbara Hull Foster, Board Counsel; Valerie Shanahan, Assistant Chief Case Manager; Katherine Wellman, Case Manager; Debra G. Woodruff, Assistant Attorney General; Sylvia J. Williams, Paralegal; Respondent; and Stuart D. Gavzy, Esquire, Counsel for Respondent. As a result of negotiations entered into during the settlement conference, Respondent agreed to the following Consent Order.

### Findings of Fact

1. On January 17, 1964, Respondent was licensed to practice medicine in the State of Maryland and remained licensed until September 30, 1986.
2. On January 11, 1982, Respondent pleaded guilty to



seven counts of making, uttering, or selling a false or forged prescription involving a Schedule II controlled drug in *The State of Ohio v Josette W. Bianchine*, Indictment No. 81CR-06-1924, in the Court of Common Pleas, Franklin County, Ohio.

3. On July 14, 1982, the State Medical Board of Ohio (the Ohio Board) suspended Respondent's license to practice medicine in Ohio as a result of Respondent's guilty plea and subsequent conviction as described in paragraph 2 above. The suspension was stayed subject to the following conditions of probation:

1. Respondent is not to prescribe or dispense any drugs, chemicals or substances that are habit-forming;
2. Respondent is to appear in person before the Ohio State Medical Board or its representatives every four months; and
3. Respondent is to comply with all provisions of her court probation.
4. After notification by the Ohio Board, Respondent failed to appear before the Ohio Board on July 14, 1983 and August 11, 1983.
5. On December 4, 1983, the Ohio Board suspended Respondent's license to practice medicine and surgery in Ohio.
6. On or before August 31, 1984, Respondent submitted an application for renewal of her license to practice medicine in Maryland. Respondent answered "no" to the following questions:

Has your license been denied, suspended, or revoked in any state?

Have you been convicted of any violation of law pertaining to your profession?

Respondent's answers were false because:

- a. On December 4, 1983, Respondent's license to practice medicine in Ohio was suspended; and
- b. On January 11, 1982, Respondent pleaded guilty to seven counts of making, uttering, or selling a false or forged prescription involving Schedule II controlled drugs.

Unaware of Respondent's false answers, the Maryland State Board of Medical Examiners renewed Respondent's license to practice medicine in Maryland on or before September 30, 1984.

7. On June 24, 1986, the New York State Board of Professional Medical Conduct (the NY Board) suspended Respondent's license to practice medicine in New York as a result of the disciplinary action taken by the Ohio Board on December 4, 1983. The suspension in New York was stayed subject to conditions of probation for one year.
8. Respondent failed to submit an application for

renewal of her license to practice medicine in Maryland on or before September 30, 1986.

9. On or before October 17, 1986, Respondent submitted an application for reinstatement of her license to practice medicine in Ohio. On December 4, 1987, Respondent and the Ohio Board entered into a Consent Agreement in which the Ohio Board reinstated Respondent's license to practice medicine but prohibited Respondent from prescribing or dispensing addictive drugs.

10. On December 29, 1988, Respondent submitted an application for reinstatement of her license to practice medicine in Maryland. Respondent's answers to certain questions on the application are as follow:

7. Have you ever been charged with violation of any law relative to practice of medicine or relative to any crime (felony)? No.

10. Have you ever been notified by any medical licensing agency or medical society of a complaint against you or of an investigation related to the practice of medicine? Never have I had any complaint related to the practice of medicine.

11. Have you ever had your medical license revoked, suspended or placed on probation or have you surrendered a (local, state, or federal) permit to prescribe controlled substances? Yes, in the State of Ohio, 1981, license was suspended and I was placed on probation for a period of five years. License reinstated in 1988.

11. Respondent's answer to question seven on the application for reinstatement of her Maryland license was false because on May 8, 1981, in the Court of Common Pleas, Franklin County, Ohio, the Grand Jury indicted Respondent and charged Respondent with:

- a. two counts of writing prescriptions for controlled dangerous substances for another person with the purpose that the recipient of the controlled substances would sell or offer to sell the controlled substances; and
- b. seven counts of making, uttering, or selling a false or forged prescription where the drug involved was a Schedule II controlled substance.<sup>1</sup>

12. Respondent's answer to question ten on the application for reinstatement of her Maryland license was false because Respondent was notified to appear at a formal hearing by the Ohio Board on April 28, 1982 after the Ohio Board charged<sup>2</sup> Respondent based on her guilty plea and subsequent conviction of seven counts of "... illegal prescribing of drug documents."

13. Respondent's answer to question ten on the application for reinstatement of her Maryland license was also false because Respondent failed to report that she appeared at a discipli-

nary hearing on January 9, 1986, *In the Matter of the Disciplinary Proceeding against Josette W. Bianchine*, No. 4286, after being charged on October 8, 1985 by the New York State Board for Professional Medical Conduct with having been found guilty of improper professional practice or professional misconduct by the Ohio Board.

14. Respondent's answer to question eleven on the application for reinstatement of her Maryland license was false because Respondent failed to report:
  - a. that she surrendered her Ohio DEA Registration #AB6338657 on February 28, 1983;
  - b. that her license to practice medicine in Ohio was suspended from December 3, 1983 until December 14, 1987; and
  - c. that her license to practice medicine in New York was suspended; that suspension was stayed and she was placed on probation for one year on June 24, 1986.
15. Unaware of Respondent's false answers, the State Board of Physician Quality Assurance issued a license to practice medicine in Maryland to Respondent on April 27, 1989.

### Conclusions of Law

Based upon the Findings of Fact, the Board concludes, as a matter of law, that Respondent fraudulently or deceptively obtained or attempted to obtain a license for the applicant or licensee or for another. (*See Md. Health Occ. Code Ann. §14-504(a)(1)* (1989 Cum. Supp.).)

### Order

Based on the foregoing Findings of Fact, it is this 28th day of January 1991, by an affirmative vote of the majority of the full authorized membership of those members of the Board of Physician Quality Assurance of Maryland who considered this case,

ORDERED that Josette W. Bianchine MD, is hereby formally REPRIMANDED; and it is further

ORDERED that the Board shall grant Respondent a license to practice medicine in Maryland subject to the following probationary conditions:

1. Respondent has signed releases permitting the Board to obtain information about Respondent from any other relevant individuals or organizations as requested by the Board.

2. Respondent must take and pass the Special Purpose Examination (SPEX) with a score of 75.
3. Respondent may not practice medicine in the State of Maryland until such time as the Settlement Committee (the Committee) approves a practice setting in which Respondent receives close supervision. Respondent may not petition the Committee to approve a practice setting until such time as Respondent passes SPEX with a score of 75. Respondent must arrange for the Committee to receive monthly reports on Respondent's progress during supervised practice.
4. After one year of practicing under close supervision, Respondent may petition the Board for permission to practice without supervision; and be it further

ORDERED that Respondent will be responsible for all costs incurred under this Consent Order; and be it further

ORDERED that this Consent Order is considered a public document pursuant to *Md. State Gov't Code Ann. §10-611, et seq* (1990 Cum. Supp.).

ISRAEL H. WEINER MD, Chairperson  
Maryland Board of Physician Quality Assurance

### Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of ten pages.

1. By signing this Consent, I hereby submit to this Order and its conditions.
2. I acknowledge the validity of this Order and the legal authority of the Board of Physician Quality Assurance to issue and enforce this Order.
3. I acknowledge that by consent to this Order, I am waiving my right to challenge in court the legal authority of the Board of Physician Quality Assurance to take action against my license to practice medicine in the State of Maryland.

I, Josette W. Bianchine MD, have read this Consent Order and have carefully reviewed each and every part with my attorney, Christine Bianchine, Esquire. I understand it and voluntarily agree to it.

I sign and consent to this Order after having an opportunity to consult with counsel and with full understanding of the meaning and terms of the Order.

JOSETTE W. BIANCHINE MD



## A Clinical Moment With . . . Diabetes

### A "Touch of Diabetes"

*Doctor, I was told by the medical clinic at work after a blood screening procedure that I have a "touch of diabetes" and should come to see you. I am fifty years old, feel fine and, except for being thirty pounds overweight, I believe that I am in excellent health. Why am I here? My father had diabetes, but he must have had a different kind because he took insulin in his later years and had visual complications and circulatory problems.*

The National Diabetes Data Group has established the following diagnostic criteria for diabetes in nonpregnant adults. (Any one is considered diagnostic of diabetes.)

- A. Presence of the classic symptoms of diabetes and rapid weight loss, together with gross and unequivocal elevation of plasma glucose.
- B. Elevated fasting glucose concentration on more than one occasion.
  - venous plasma  $\geq 140$  mg/dl
  - venous whole blood  $\geq 120$  mg/dl
  - capillary whole blood  $\geq 120$  mg/dlIf the fasting glucose concentration meets these criteria, the oral glucose tolerance test (OGTT) is not required. Indeed, virtually all persons with a fasting plasma glucose (FPG) greater than 140 mg/dl will exhibit an OGTT that meets or exceeds the criteria described in C.
- C. Fasting glucose concentration less than that which is diagnostic of diabetes (B - above), but sustained elevated glucose concentration during the OGTT on more than one occasion. Both the two-hour sample and another sample taken between the

administration of the 75-g glucose dose and two hours later must meet the following criteria:

- venous plasma  $\geq 200$  mg/dl
- venous whole blood  $\geq 180$  mg/dl
- capillary whole blood  $\geq 200$  mg/dl

For a diagnosis of Impaired Glucose Tolerance (IGT) in Nonpregnant Adults, three criteria must be met: the fasting glucose concentration must be below the value that is diagnostic for diabetes; the glucose concentration two hours after a 75-g oral glucose challenge must be between normal and diabetic values; and a value between the one-half hour, one hour, or one-and-one-half hour OGTT value must be unequivocally elevated.

If a patient has laboratory results compatible with a diagnosis of diabetes mellitus, that person does not have a "touch of diabetes" -- s(he) has diabetes. Diabetes education, dietary instruction, and an exercise program should be begun immediately. If a before meal and a bedtime plasma glucose of 120 mg/dl cannot be maintained by that regimen, the use of a sulfonylurea drug or insulin is needed.

The term, "a touch of diabetes," is not an acceptable one. For those patients who demonstrate plasma glucose values above normal on occasion but insufficient to be diagnosed as diabetes mellitus, the term, "Impaired Glucose Tolerance (IGT) in Nonpregnant Adults," is used. Persons having a diagnosis of IGT should be followed regularly for possible deterioration to diabetes.

DEWITT E. DELAWTER MD  
Editor

### A CLINICAL MOMENT WITH...

Physicians in all specialties are invited to submit synopses of current clinical problems in a question and answer format.

Write: **A Clinical Moment With...**  
*Maryland Medical Journal*  
1211 Cathedral Street  
Baltimore, MD 21201-5585

### PHYSICIANS:

M.D.'s with general medical, surgical, or Family Practice background to work as urgent care physicians in busy hospital Emergency Department. Part-time/full-time positions available. Competitive salary; flexible hours.

For details, contact: Dan K. Morhaim, M.D.  
Franklin Square Hospital Center  
9000 Franklin Square Drive  
Baltimore, MD 21237  
(301) 682-7046

## Prognostic Factors After Liver Resections

In the United States, most malignant tumors of the liver are metastatic, mainly from colorectal cancer. Primary hepatic malignancies are less common.

### Liver Metastases from Colorectal Cancer

Over 800 patients with liver metastases who were rendered clinically disease-free by resection have been registered in the National Registry of Hepatic Metastases.<sup>1</sup> The male:female ratio was almost equal. The operative mortality (i.e., death within thirty days of liver resection) was about 8 percent. The overall five-year survival was 24 percent. While there was no significant difference in survival between men and women, differences in the five-year survival were noted according to the following factors.

1. Age
 

Forty years of age or younger	40 percent
Forty to seventy years of age	32 percent
Over seventy years of age	30 percent
2. Initial disease-free survival (i.e., the time from bowel resections until there was evidence of liver metastases)
 

One month or less	24 percent
One year	28 percent
Over one year	40 percent

Therefore, longer periods yield better results.

3. The stage of the cancer at the time of colorectal surgery
 

Regional lymph nodes absent	38 percent
Regional lymph nodes present	28 percent
4. Number of metastases in the liver
 

One metastasis	37 percent
Two metastases	24 percent
Three to four metastases	18 percent
More than four metastases	Very poor

Therefore, surgical removal of three, but not more than four, is highly recommended if at all possible.

5. Lobar involvement
 

Multiple metastases in one lobe	28 percent
Multiple metastases in both lobes	19 percent

Data from Erlangen, West Germany showed similar five-year survival at 21 percent.

6. Margins of liver resection
 

Margin of resection positive	18 percent
Margin of resection negative, but less than 1 cm	26 percent
Margin of resection negative, but more than 1 cm	44 percent

Erlangen data indicate zero percent five-year survival in their patients with positive resection margin (i.e., tumor present at the margins of liver resection). They strongly suggest that if the patient cannot be made clinically disease-free at the time of resection, surgery is contraindicated. While some investigators look at these data as they stand, we must keep in mind that positive margins are encountered in patients with a large tumor load.

### 7. Extrahepatic metastases

Of twenty-five patients who had liver metastases and celiac and porta hepatic lymph node metastases that were resected, only one survived for five years. Similarly, of thirty-seven patients who had liver metastases with either lung, peritoneal, or adrenal metastases that were resected, only one survived for five years. Therefore, it seems that debulking of the tumor gave no prognostic advantage except in carcinoid tumors.

### Primary Hepatic Malignancies

One hundred six patients were studied. Their ages ranged from five to eighty-six years of age. There were nine operative and postoperative deaths (8.5 percent). The causes of death were intra-operative hemorrhage, cirrhosis, liver failure secondary to aggressive resections, myocardial infarction, and celiac axis thrombosis. The five-year survival was 31.9 percent. Fibrolamellar hepatocellular carcinomas are rare and they have the best prognosis. On the other hand, cholangiocarcinoma gave poorer results than hepatocellular carcinomas.<sup>2</sup>

### References

1. Hughes KS. Hepatic metastases registry: Resection of the liver for colorectal carcinoma metastases. A multi-institutional study of patterns of recurrence. *Surgery* 1986; 100:278-84.
2. Starzl TE, Iwatsuki S. Liver resection for primary hepatic neoplasms. *Acta Chir Australia* 1988; 4:374-9.

E. GEORGE ELIAS MD, PhD  
Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland

Tumor conferences are held weekly on Tuesday between 8 and 9 am in Room S9A06 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call 301-328-5224 by noon Monday to be placed on the schedule: Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD 21201. ■



## Auxiliary

### Why Belong to the Auxiliary?

We are well aware of the changes facing the medical profession today -- from government regulation, to professional liability, to competition and cost pressures. Amid these changes, the overriding challenge for physicians is to maintain excellence in patient care in the face of complexity and uncertainty.

Within the AMA Auxiliary, we have what is needed to help assure quality health care; it is our ability to work together to reach common goals. The key to working together is our federation of national, state, and county auxiliaries.

The AMA Auxiliary federation is the organization to speak for our concerns, to help find viable solutions to the problems of today, and to address changing needs and demands. Our federation gives us the *cooperative action, unity, and strength* that will help realize our potential to respond positively to change.

The importance of cooperative action cannot be overemphasized. For those of us in the Auxiliary, that's the name of the game. The AMA Auxiliary's strength lies in a federated structure in which each level of the organization -- county, state, and national -- works together to enhance activity and reach common goals.

*Cooperative action* is the foundation of our programming as we share ideas through our national network. It is what has enabled us to have an impact on such problems as child abuse, teenage suicide, and drunk driving; to encourage prenatal and postnatal care; and to enhance auxiliary involvement in community services for the growing numbers of older Americans. It is what is helping us to work with the AMA in its initiative to protect the health of our nation's youth.

Cooperative action enables us to do the right things, at the right time, in the right way, and for the right reasons.

Cooperative action is also what enables us to work with our medical associations to add to the effectiveness of our programs. Across the country, auxiliaries have joined medical societies to influence legislation through our nationwide phone bank system and our other legislative contact systems, to support health programs, and to provide needed funds for medical education. By building upon the energies and the strengths of both groups, we are able to have a greater effect on the issues of today.

The cooperative action that is within our federation will give us the strength we need to make a positive impact on the concerns of these times. But *unity* is also important because our federation is built on diversity. Auxiliary members in every city, county, and state have special, personal interpretations of the meaning of our common goals. And, that's the way it should be, because we are a diverse group -- geographically, socially, economically, and politically.

But while this diversity gives us flexibility and choice, it also brings a need to uphold and work for strong values and goals. For these values and goals are the common thread -- the unity -- that binds us together, so that despite our diversity, we are able to use our federated structure to invest ourselves in community programs that will improve the lives of others. Unity also gives us the ability to provide support for physicians' spouses in the stresses that result from medicine's changing environment.

### On the Leading Edge

The Southern Medical Association (SMA) and Auxiliary (SMAA) recently announced plans for the 85th Annual Scientific Assembly, "On the Leading Edge." Included in the program are twenty-four specialty section meetings with over 500 scientific papers, 340 exhibits, twenty-six scientific and clinical symposia, twenty-three postgraduate courses, and twenty-four round table luncheon sessions.

The opening ceremony's speaker will be General Paul X. Kel-

ley, Commandant of the Marine Corps and Member of the Joint Chiefs of Staff. Doctors' Day luncheon speaker will be the well-known Paul Harvey. The President's Dinner Dance will feature pianist Peter Nero and vocalist Shirley Jones, accompanied by the Atlanta Pops Orchestra.

The SMA Auxiliary will hold its General Session/Business Meeting on November 17, at which time our Maryland representatives, Vice Councilor Josie Figueroa and Councilor Ching Barretto, will be

introduced. At the Auxiliary Luncheon, new officers will be installed, including Maryland Auxilian, Mildred Taylor, as Treasurer.

Plan to join the Southern Medical Association Auxiliary November 16-19, 1991 for the convention in Atlanta, Georgia -- an exciting metropolis which combines the charm of the past with the energy of the present and the dreams of the future.

For additional information, call 1-800-423-4992.

Our unity is what keeps our programs on target in these changing times. For while diversity is the spice of our membership, the unified values and common goals we share as a federation are its lifeblood. They are what will enable us to reach our potential and make a difference in the world around us.

Finally, let's talk about *strength*. A federation implies strength, but our federation will be strong only as long as we continue to work together to reach our common goals. So often we take things for granted. We need to remember how this federation came about. This organization didn't start at the top with a national level as an arbitrary structure. It was started by groups of physicians' spouses like those of us in Maryland. These physicians' spouses first got together in their own communities to share concerns and goals. Then these groups formed county organizations, then the county organizations formed state organizations, and then the state organizations formed the national organization. This federation of county, state, and national organizations became a reality because it was needed. Each level still serves a different and vital purpose. Together, they make us strong.

Our county auxiliaries are where the action is. Our state auxiliaries are where the action is coordinated. Our national auxiliary is where the action comes together. We need to remember that we are not

separate from each other. Each time AMA Auxiliary leaders represent you, each time a publication such as *Facets* informs you of an issue or the status of a current issue, each time a grassroots phone bank is initiated and proves successful, each time a program is shared through the project bank, each time you attend a leadership confluence or use the professional skills development service or watch one of the new videos or use the programs workbooks, you are seeing the federation at work -- a federation whose *cooperative action, unity, and strength* are needed by every physician's spouse today.

William Jennings Bryan once wrote "Destiny is not a matter of chance. It is a matter of choice. It is not a thing to be waited for. It is a thing to be achieved."

If ever our spouses needed our support, it is now. If ever our communities needed our health advocacy, it is now. If ever the medical family needed our encouragement, it is now. Our destiny is to use the potential we have to help the medical profession, to promote good health, and to help the medical family meet the challenge of change.

Together we are stronger. Together we can do more. Together we will make a difference.

(Adapted from material provided by the AMA Auxiliary.) ■

## YOUR WILL: a powerful way to help others.



Think about it. Remembering a worthwhile charity in your will is a *powerful* way to assure that the principles you believe in are supported and that your hard work will help others in the future.

### CONSIDER

#### The Charitable & Educational Foundation of the Medical and Chirurgical Faculty of Maryland

1211 Cathedral Street, Baltimore, MD 21201

301-539-0872 / 1-800-492-1056

\*Your bequest is tax deductible\*



#### SAMPLE BEQUEST PARAGRAPH

which you might wish to share with your attorney: "I give, devise and bequeath unto The Charitable & Educational Foundation (an amount, property or % of one's estate) to be held as an endowment, to be called The (Name of person commemorated and memorialized) Endowment, the income to further the endeavors of the Faculty.

Physicians' Quality Assurance Board Actions  
appear regularly in MMJ.

## Maryland Medical Journal Mission Statement

The purpose of the *Maryland Medical Journal (MMJ)* is to educate and inform its readers of progress in clinical medicine and medical research and of development in other fields of interest to physicians; to promote the science and art of medicine toward the betterment of public health; and to provide a literate forum for open and responsible discussion of matters relevant to the field of medicine.



# COMING OUT OF THE DARK

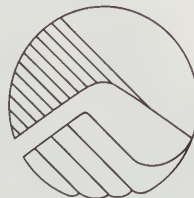
Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians, with a confidential and nondisciplinary focus...Addiction, Marital/Family Conflicts, Psychiatric Illness, Organic Impairment, Physical Handicap...If these problems exist, we can help find the solution. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families.

The Committee is NONDISCIPLINARY and information is kept CONFIDENTIAL. If you, a colleague, or family member is in need of our services call (301)962-5580 or call toll free (800)992-7010, or leave a message 24 hours a day, 7 days a week at (301)727-1020.

*HELPING IS OUR BUSINESS...All donations to the Physician Rehabilitation Committee are used for the delivery of services to Maryland physicians in need of help. If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation, 1204 Maryland Avenue, Baltimore, Maryland 21201 Please note on your donation: "Physician Rehab"*

Medical  
and Chirurgical Faculty  
of Maryland



**Physician  
Rehabilitation  
Committee**



# Make an Impact with MMPAC

**JOIN THE CAUSE!  
GET INVOLVED!  
GET POLITICAL!**

Is it fair that only some Maryland  
physicians support the political activity  
that benefits all physicians?

**JOIN...**

**MARYLAND  
MEDICAL  
POLITICAL  
ACTION  
COMMITTEE**

Send Your \$100 check to:

John T. Lynn, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201-5585

Contributions to AMPAC and State PAC  
are not deductible as charitable  
contributions for Federal  
income tax purposes

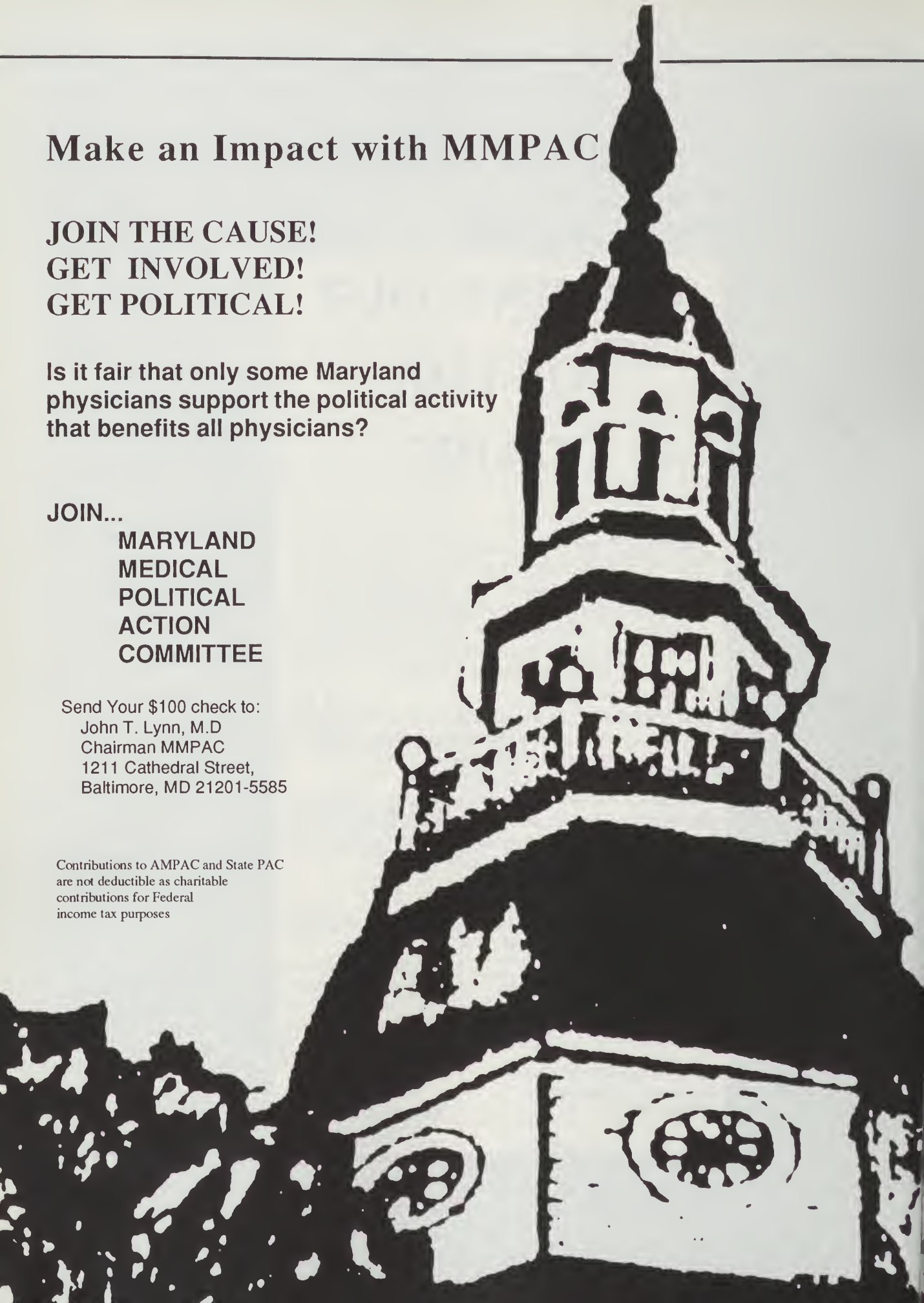






Photo courtesy of the Office of Public Affairs, The Johns Hopkins Medical Institutions

*John L. Cameron MD*, Professor and Chairman for the Department of Surgery and Surgeon-in-Chief at The Johns Hopkins Hospital, was recently elected president of the Society for Surgery of the Alimentary Tract (SSAT) during Digestive Disease Week. The SSAT, founded in 1960, provides a

forum for 1,100 surgeons interested in the latest diagnosis, treatment, and management of problems of the digestive tract. The author of over 200 articles, sixty-three book chapters, and four books, Dr. Cameron received his BA from Harvard University and his MD from The Johns Hopkins University School of Medicine. An active member of numerous societies, Dr. Cameron is currently President-elect, Society for Surgery of the Alimentary Tract; Director, American Board of Surgery; and Vice President, Society of Clinical Surgery.



The Maryland Radiological Society recently elected *Lawrence E. Holder MD, FACR* as President. A graduate of Vanderbilt University (magna cum laude) and Washington University School of Medicine in St. Louis, Missouri, Dr. Holder is currently Director of Nuclear Medicine at Union Memorial Hospital, Chief of Radiology at Children's Hospital,

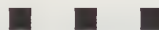
Chief of Radiology at Cardinal Shehan Center for the Aging at Stella Maris Hospice, and a Radiologist with Drs. Schultze, Snider & Associates PA. An Assistant Professor in Radiology at The Johns Hopkins University School of Medicine, he has also taught at the University of Cincinnati College of Medicine and the Washington University School of Medicine. A Fellow in the American College of Radiology, Dr. Holder has over forty publications to his credit and has made over twenty presentations to state and national specialty societies. Dr. Holder is married and has three children.



Photo courtesy of the Office of Public Affairs, The Johns Hopkins Medical Institutions

On August 1, 1991, *Theodore M. King MD, PhD* became President of Family Health International (FHI), a nonprofit North Carolina organization engaged in research and technical assistance on contraceptive development, reproductive health, family planning, and AIDS prevention. Dr. King,

internationally recognized for his work in women's reproductive health, has been an Associate Professor at the University of Missouri School of Medicine, a Professor and Chairman of the Department of Obstetrics and Gynecology at Albany Medical College and, most recently, Professor and Director of the Department of Gynecology and Obstetrics at The Johns Hopkins University School of Medicine, and President of the Johns Hopkins Program for International Education in Gynecology and Obstetrics. Author of over seventy-five manuscripts, Dr. King graduated from Quincy College in Illinois with a BS in biology and chemistry and went on to receive a Masters degree in zoology from the University of Illinois, a PhD in physiology from Michigan State University, and an MD from the University of Illinois School of Medicine. Winner of numerous awards, he is a Fellow in the American College of Surgery and a Fellow in the American College of Obstetricians and Gynecologists.



*Harry C. Knipp MD*, a Diplomate of the American Board of Radiology, was recently elected Treasurer of the Maryland Radiological Society. A graduate of Loyola College and the University of Maryland School of Medicine, Dr. Knipp is extremely active in community activities. Married, with three children, he is a partner in Carroll Imaging Associates PA; is on both

the staff of the Department of Diagnostic Radiology, Ultrasound, and Nuclear Medicine at Carroll County General Hospital and the Johns Hopkins Health Plan;



## MEMBERS IN THE NEWS MEMBERS

is an adjunct Assistant Professor in the Department of Diagnostic Radiology of the University of Maryland School of Medicine; and is a Consultant Radiologist with Springfield Hospital Center.



Photo courtesy of the Office of Public Affairs, The Johns Hopkins Medical Institutions

*Patrick C. Walsh MD, Urologist-in-Chief at The James Buchanan Brady Urological Institute of The Johns Hopkins Hospital, was recently awarded the 1991 Distinguished Alumnus Award by the Medical Alumni Association of Case Western Reserve University. A member of the Editorial Board of four medical*

*journals, Dr. Walsh was recognized for "outstanding service by an alumnus whose work has made a significant mark in the field of medicine and whose efforts have brought distinction for the Case Western Reserve University School of Medicine." A prolific author, he has served as a consultant to numerous local hospitals, as well as to federal government organizations. Dr. Walsh has earned many academic honors for research, patient care, and writing.* ■

### *Physician's Practice Digest*

*During the past year, in an effort to improve communications and widen the scope of member services, Med Chi developed a new publication, Physician's Practice Digest. Issued quarterly, PPD features information related to medical practice management. The reaction to PPD has been overwhelmingly positive within Maryland as well as around the country. The publication won the 1990 Sandoz Pharmaceutical Award for Excellence in Medical Journalism.*

*Med Chi looks forward to Physician's Practice Digest becoming a reliable and up-to-date source of crucial practice management information for all physicians in Maryland. Submissions and suggestions are always welcome!*

## AUTHOR INFORMATION AUTHOR

Manuscripts may be sent to Editor, *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a WordPerfect or ASCII format.

Include full name of author(s) with highest degrees and academic or professional titles.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

An introductory synopsis of approximately 25 to 50 words is required.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to 20 in major contributions and fewer in shorter articles. Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see the *Uniform Requirements for Manuscripts Submitted to Biomedical Journals* compiled by the International Committee on Medical Journal Editors (available through the *Annals of Internal Medicine*).

Permissions: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in *MMJ* is protected by copyright and may not be reproduced without the written permission of both the principal author and *MMJ*.



Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset. ■



# UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE

**CME Courses:** For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

October 4-5

**Medical Consultation and Management in the Perioperative Period**, at the Sheraton Inner Harbor Hotel, Baltimore, MD. Info: Lorraine Zaganas, 301-328-6598.

October 4-6

**Seventh Annual Maryland Contact Lens Symposium**, at the Turf Valley Hotel and Country Club, Ellicott City, MD. 12 Cat 1 AMA/PRA credits. Fee: \$165.

November 8

**Controversies in Pharmacology and the Elderly**, at the Omni International Hotel, Baltimore, MD. Credits and fee to be determined.

Continuously  
Throughout the Year

**Visiting Professor Program** - A new 1991-1992 directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.

## Speak Out on Consultation

Consultation, a radio program sponsored by the Medical and Chirurgical Faculty of Maryland allows Med Chi physicians to appear each week on the program to discuss the latest developments in medicine and to answer questions about health issues. Med Chi currently airs two sessions of Consultation:

### Saturday Evening Consultation

A live program  
Saturday from 5:00 to 6:00 p.m. and 6:00 to 7:00 p.m.  
Broadcast across the country  
An hour-long program  
Call-in format: Physician answers questions from listeners

### Sunday Morning Consultation

A pre-taped program  
Sunday at 7:30 a.m.  
Broadcast on WBAL - AM radio  
A half-hour program  
Interview format: one-on-one talk with John Stupak

Med Chi encourages all physicians to appear on these innovative programs. To register fill in the form below.  
Yes, I am interested in speaking on Consultation. Please contact me with scheduling information.

Name \_\_\_\_\_ Address \_\_\_\_\_  
Phone \_\_\_\_\_ Specialty \_\_\_\_\_

Return this form to: Betsy Newman, Med Chi, 1211 Cathedral Street, Baltimore, MD 21201.  
For more information contact Betsy Newman at 301-539-0872 or in Maryland 1-800-492-1056.

## MISCELLANEOUS MEETINGS

October 7-11	<b>8th Annual International Congress of Human Genetics</b> , sponsored by the American Society of Human Genetics at the Washington Convention Center in Washington, DC. Info: Elaine Strass, 301-571-1825.
October 9-13	<b>Rx for Health Care: The Realities of Reform</b> , sponsored by the American Society of Internal Medicine at the J.W. Marriott Hotel, Washington, DC. Cat 1 AMA/PRA credits available. Fee: \$125 ASIM members; \$200 nonmembers; \$25 IM residents. Info: Lisa Derby, 202-289-1700, ext. 615.
October 18	<b>Arthritis Care for the 1990s: A Practical Approach for the Primary Care Physician</b> , sponsored by the Maryland Chapter of the Arthritis Foundation, at Loews Annapolis Hotel, Annapolis, MD. AMA/PRA credits available. Fee: \$40; \$30 if not requesting CMEs. Info: Karen Krug, 301-561-8090.
October 21-22	<b>5th Annual National Disability Management Conference</b> , sponsored by the Washington Business Group on Health (WBGH), at the Crystal Gateway Marriott in Arlington, VA. Fee: \$375 WBGH members; \$450 nonmembers. Info: Heather Patterson, 202-408-9320.
October 24-26	<b>18th Anniversary: New Techniques and Concepts in Cardiology</b> , sponsored by the American College of Cardiology, at the Hyatt Regency Hotel, Washington, DC. Info: 301-897-2695.
October 25-27	<b>3rd Annual Infectious Disease Review Course</b> , sponsored by the Center for Bio-medical Communication in cooperation with the Clinical Center of NIH, at the Crowne Plaza Hotel, Rockville, MD. 18.75 Cat 1 AMA/PRA credits. Fee: \$485 physicians; \$395 physicians-in-training and allied health professionals. Info: Svetlana Lisanti, 201-385-8080.
November 16	<b>2nd Annual Conference on Addiction: Prevention, Recognition and Treatment</b> , sponsored by Med Chi's Physician Rehabilitation Committee and the Committee on Alcoholism and Chemical Dependency at the Faculty Building, 1211 Cathedral St., Baltimore, MD. 7 Cat 1 AMA/PRA credits. Fee: \$50 Med Chi members; \$100 nonmembers; \$25 allied health professionals; free for students and residents. Info: Vivian Smith, 301-539-0872 or 1-800-492-1056.
December 7-8	<b>Managing Diabetes in the 1990s and the Great Masqueraders - Psychiatric Disorders: Overviews for the Family Physician</b> , sponsored by the Maryland Academy of Family Physicians at the Sheraton Hotel, Wilmington, DE. 6.5 Cat 1 AMA/PRA credits. Fee: \$55 MAFP members; \$80 nonmembers; \$35 paramedicals; Free for residents, medical students, and MAFP retired and life members. Info: Joseph P. Connelly Jr., MD, 301-747-1980
January 24-25, 1992	<b>Performing Arts Medicine: Issues in Diagnosis and Management</b> , sponsored by Med Chi's Committee on Medicine and the Performing Arts, at the Faculty Building, 1211 Cathedral St., Baltimore, MD. CME credits available. Info: Susan Harman, 301-539-0872 or 1-800-492-1056.

Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.

October 3	Update on Therapeutic Advances in Hepatitis C
October 10	Functional Endoscopic Sinus Surgery
October 24	Frozen Section Diagnosis
October 31	Anxiety
November 7	Medical Malpractice Update
November 14	New Strategies in the Therapy of Rheumatoid Arthritis
November 21	Irritable Bowel Syndrome
December 5	Gastrointestinal Surgery for Severe Obesity
December 12	Holiday Depression
December 19	Ocular Manifestations of Systemic Disease



# THE JOHNS HOPKINS MEDICAL INSTITUTIONS

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education Activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-2959).

October 4-5	<b>Asthma, Allergy and Immunology</b> , at the Sheraton Towson Conference Hotel, Baltimore, MD. MNA credit is pending. Fee: \$125 one day; \$225 two days.
October 7-9	<b>Toxicology Update '91: Concepts and Advances in Immunotoxicology</b> . Info: Dr. Jacqueline Corn or Catherine Walsh, 301-955-2609.
October 14-19	<b>33rd Annual Emil Novak Memorial Course on Gynecology, Gynecological Pathology, Endocrinology, and High-risk Obstetrics</b> . Cat 1 AMA/PRA credits and ACOG cognates available. Fee: \$650 physicians; \$450 residents, fellows and allied health professionals.
October 24-30	<b>Fifth Annual Postgraduate Course -- Core Content of Emergency Medicine: A Comprehensive Review</b> , at the Marriott Hotel, BWI Airport, Baltimore, MD. Cat 1 AMA/PRA credits and ACOG cognates available. Fee: \$1,050 physicians, \$950 residents.
October 25	<b>Anxiety Disorders: A Diagnostic Challenge to Psychiatry and Medicine in the 1990s</b> . 6 Cat 1 AMA/PRA credits. Fee: \$50 physicians; \$40 residents, fellows and allied health professionals.
November 1-2	<b>Progress in Pediatrics</b> . 11 Cat 1 AMA/PRA credits. Fee: \$140 physicians; \$85 residents, fellows and nurse practitioners.
November 2-3	<b>Hemodynamic Monitoring, Patient Care and Pulmonary Artery Catheterization - A Hands-on Course</b> . 14 Cat 1 AMA/PRA credits. Fee: \$550.
November 4-6	<b>Advanced Pediatric Life Support Courses</b> . 20 Cat 1 AMA/PRA credits; ACEP credits applied for. Fee: \$525.
November 8	<b>Update on Sinusitis for the Practitioner</b> . 9 Cat 1 AMA/PRA credits. Fee: \$150 physicians; \$80 residents, fellows, and allied health professionals.
November 9	<b>Second Annual Neurology for the Primary Practitioner</b> , at the Harbor Court Hotel, Baltimore, MD. 7 Cat 1 AMA/PRA credits. Fee: \$100 physicians; \$60 residents, fellows, and allied health professionals.
November 15	<b>Management of Diabetic Retinopathy: Application of Guidelines from 1991 ETDRS Publications</b> . 8 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents, fellows, and allied health professionals.
December 12-14	<b>4th Annual Wilmer Institute Current Concepts in Ophthalmology plus Hands-on Excimer Laser and Phacoemulsification Wet Labs</b> . 20 Cat 1 AMA/PRA credits. Fee: \$300; \$250 those in training.
Continuously Throughout the Year	<b>Visiting Preceptorship in Pediatric Critical Care Medicine</b> . Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. <b>Ophthalmic Electrophysiology Technician Training Course</b> . Ongoing one-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. <b>Ophthalmology Grand Rounds</b> . Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. Thursdays, 7:30-9:00 am. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700. <b>Neuro-ophthalmology Conference</b> . Held twice per month. Info: 301-955-5700. <b>Cornea Conference</b> . Held monthly. Info: 301-955-5700. <b>The Department of Radiology and Radiological Sciences</b> offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.

## THE JOHNS HOPKINS MEDICAL INSTITUTIONS

**Continuously  
Throughout the Year  
(continued)**

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.

## Physician Placement Services

The Medical and Chirurgical Faculty of the State of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

**Physician Placement Service  
1211 Cathedral St., Baltimore, MD 21201  
(301-539-0872)**

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland.

**MMJ** announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

## BECO MANAGEMENT, INC.

### Medical Suites Available

Montgomery Village Professional Center  
19201 - 19271 Montgomery Village Avenue  
Gaithersburg, Maryland

Southern Medical Building  
9131 Piscataway Road  
Clinton, Maryland

Branch Avenue Medical Arts Building  
3611 Branch Avenue  
Temple Hills, Maryland

White Oak Professional Building  
11161 New Hampshire Avenue  
Silver Spring, Maryland

Garwyn Medical Center  
2300 Garrison Boulevard  
Baltimore, Maryland

Randallstown Medical Center  
5310 Old Court Road  
Across from the Baltimore County General Hospital

BECO Management, Inc. owns and manages all of these top quality medical office facilities.

BECO Management, Inc. knows what the medical professional demands and guarantees professional, responsive service to all of our valued clientele.

For further information contact:  
Marc Bellet (301) 681-3550

## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Dr. Anne Salmon Barone  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000



# AIM HIGH



## BE AN AIR FORCE PHYSICIAN.

Become the dedicated physician you want to be while serving your country in today's Air Force. Discover the tremendous benefits of Air Force medicine. Talk to an Air Force medical program manager about the quality lifestyle, quality benefits and 30 days of vacation with pay per year that are part of a medical career with the Air Force. And enjoy the satisfaction of a general practice without the financial and management burden. Today's Air Force offers an exciting medical environment and a non-contributing retirement plan for physicians who qualify. Learn more about becoming an Air Force physician. Call

**USAF HEALTH  
PROFESSIONS  
COLLECT  
(301)981-7897**





### FAMILY PRACTICE

Two female family practice physicians desire a third to join them in active and growing Pasadena, MD practice. Must be Board Certified. Call 255-2700 for further information. Ask for Carla Varnum.

### PART-TIME EMERGENCY MEDICINE

Baltimore/Washington Area. Part-time positions available in highly desirable, moderate volume Emergency Department (28,500 patients in 1990) at Howard County General Hospital. Hospital is located in an attractive community situated between Baltimore and Washington DC in Columbia, MD. Applicants should be board certified/prepared in emergency medicine or related specialty. Send CV to Paul Emergency Physicians Group, Sam Shoemaker Bldg, Ste 201, 11065 Little Patuxent Parkway, Columbia, MD 21044. 301-997-1414 or 301-467-3886.

### OPHTHALMOLOGIST

Wanted for Ellicott City office. Equipment provided, flexible terms. Reply to Box 9.

### PHYSICIANS WANTED

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

### PEDIATRICIAN

Pediatric Group, Baltimore suburb, desires pediatrician for employment, leading to full partnership. Send resume to Box 9, 9121 Reistertown Road, Owings Mills, MD 21117.

### IM/FP PHYSICIAN

Husband/wife Internal Medicine General Practice seeking BC/BE, Internal Medicine or Family Practice Physician who desires part-time practice. Ideal for physician raising a family. Ability to cover Crofton office full-time 3 to 4 weeks a year and willingness to cover hospital practice desired. Contact Joan McHugh, Office Manager, 301-721-7900.

### GENERAL INTERNIST

The Department of Medicine at Franklin Square Hospital Center has been awarded a Public Health Service grant for residency training in General Internal Medicine. The grant award included approximately 50% support for a general internist with a strong background in primary care education. The Department is currently seeking applicants for this position. The physician recruited for this half-time position will work primarily in conjunction with the Director of Ambulatory Medicine in expanding the existent continuing training on-site at Franklin Square, as well as incorporation of selected community sites. This physician will be significantly involved in the development of a formal behavioral science curriculum to include psychosocial issues, interviewing skills, addiction training, and cross-cultural medicine (religious beliefs, concepts of disease and health, attitudes toward death and dying). Work in this area will be under the direction of the Director of Behavioral Science Training (currently being recruited) along with the full-time general internists on staff. Applicants for this position must be Board Certified in Internal Medicine. A fellowship in General Internal Medicine is desirable but not necessary. In addition to half-time support provided by the grant award, possibilities do exist to augment revenue by performing additional services for the hospital and the residency program or by development of a private practice. Inquiries should be accompanied by a CV and forwarded to: Daniel C. Hardesty MD, Chairman, Dept of Medicine, Franklin Square Hospital Center, Baltimore, MD 21237.

### SPECIALISTS WANTED

Orthopedic Surgeon, Pediatrician, Psychiatrist, Ophthalmologist. Please call: 859-0355.

### BEHAVIORAL SCIENTIST

The Department of Medicine at Franklin Square Hospital Center has been awarded a Public Health Service Grant for residency training in General Internal Medicine. The grant award includes approximately 50% support for a behavioral scientist with special interest in Behavioral Medicine, educational methods, and ethics. The Department is currently seeking applicants for this position. The behavioral scientist recruited for this position will work primarily in conjunction with residents and general internists in the Department. An expanded behavioral science curriculum will be developed including psychosocial issues, cross-cultural medicine, interviewing skills, addictions training, and intervention skills. Applicants for this position must have some experience in educational methodology to include curricular design and evaluation and feedback systems. It is desirable that candidates for this position be at a doctoral level. In addition to half-time support provided by the grant award, possibilities do exist to augment revenue by performing additional services for the hospital. Inquiries should be accompanied by a CV and forwarded to: Daniel C. Hardesty MD, Chairman, Dept of Medicine, Franklin Square Center, 9000 Franklin Square Dr, Baltimore, MD 21237.

### MEDICAL PRACTICE FOR SALE

Prime location on main access to a large expanding community in Harford Cty. Great oppt. Three exam rooms, spacious waiting room & sec. area. 301-592-8150, 1-800-245-6684.

### FOR SALE

Well-established thriving psychiatric practice for sale in an elegant medical building in Howard County due to retirement. Call 301-465-5260 or 301-461-4455 and leave a message.



### GYNECOLOGY PRACTICE

Excellent solo GYN practice for sale in North Baltimore. Fee for service. Good OB potential. Respond Box 10.

### MEDICAL PRACTICE FOR SALE

Established medical practice for sale. Suitable for 1 or 2 physicians. Opportunity for Family Physician or Internist. Will introduce to patients and medical community if needed. Please contact: Joseph Taler MD, 95 Aquahart Rd, Glen Burnie, MD 21061 (301-766-4747).

### OFFICE FOR SALE

Glen Burnie, MD. 1,000 sq ft suitable for 1 or 2 physicians. Near hospital. Adequate private parking. 301-484-2792.

### MEDICAL OFFICE FOR SALE OR LEASE

New office in O'Dea Medical Building next to St. Joseph Hospital. 1,010 square feet with physician's office and 3 examining rooms. Please call 435-8050.

### MEDICAL OFFICE FOR SALE OR LEASE

2000 sq ft in excellent location near Cross Keys in medical office building. Very convenient to most major hospitals. Contact Rick Tucker at 727-8347.

### MEDICAL OFFICE FOR SALE OR SUBLEASE

Brand new office located in Professional Center in Ellicott City. 912 sq ft. 2 exam rm. All equipment included. Call 461-7078.

### MEDICAL OFFICE

Suitable for 1 or 2 physicians: St. Mary's County, a rapidly growing, semirural area. Contact Leon Berube for details: 997 Old Route Five, Mechanicsville, MD 20659 (301-884-3113).

### BEL AIR OFFICE TO SHARE

OB/GYN practice wishes to sublease space in new office. Morning & afternoon hours available. Office opened July 1, 1991. Please contact Lorraine O'Connor at 339-7640. ■

### MMJ Classified Advertising

*Med Chi Members:*  
\$5 per line per insertion

*Physician Nonmembers:*  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment. Ad cancellations must be received in writing seven weeks prior to the first of the month.

Send ad replies or new ad copy to: MMJ, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

### Upper Park Heights Park Newport Apartments

2 bedroom residents from \$795, includes heat and hot water, electric additional.

Located at 7219 Park Heights Avenue. Please call

**764-2500 or 486-1869**

for an appointment.

Owned and managed by City Wide Management Co. 837-2900

Luxury, mid-rise building with elevator, secured entrance and assigned parking. 2 bedroom apartments with 2 full baths, eat-in kitchen, lots of closets, fully carpeted, individually controlled heat and air conditioning.



### Opportunities

to start, assume or join existing Pediatrician, Family Practice or Internal Medicine practice on the Eastern Shore of Maryland. Local Physician owned IPA model, HMO assisting in recruitment efforts to increase availability of Primary Care Physicians. Beautiful area located between the Chesapeake Bay and the Atlantic Ocean; close to Washington D.C. and Baltimore.

Submit Resume to:

Penny Gibson, Director Health Services  
P.O. Box 2410 • Easton, Maryland 21601  
Or Call: 1-800-334-3427, Extension #133

## Maryland Advertisers!

To advertise in Med Chi Publications contact:

**Network Publications**

**2701 N. Charles Street, Baltimore, MD 21218**

**301-235-0500 FAX 301-235-0689**

# The experience of a nationwide laboratory.

Wouldn't it be great if you could enjoy all the advantages of a nationally—  
accredited testing laboratory—right here in your own neighborhood?

Well, now you can.

- The nation's largest full-service clinical laboratory network
- Over 25 years experience in laboratory toxicology
- Accredited by the College of American Pathologists (CAP)
- Licensed by the U.S. Department of Health and Human Services



**SmithKline Beecham**  
*Clinical Laboratories*  
Maryland

**800-729-7525**

- Local courier network works on your schedule around the clock
- 24-hour turnaround time on most routine tests
- Extensive internal quality control program ensures the accuracy you need to prescribe proper treatment for your patients
- A commitment to serve and serve well.

# The convenience of a local lab.



# A BRIGHT IDEA TO START WITH...



**180mg**  
**Calan<sup>®</sup> SR**  
(verapamil HCl) 180 mg  
SUSTAINED-RELEASE CAPLETS

Address medical inquiries to:  
G.D. Searle & Co.  
Medical & Scientific  
Information Department  
4901 Searle Parkway  
Skokie, IL 60077

# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
S Y S T E M S

*We set the standard in medical computing.*



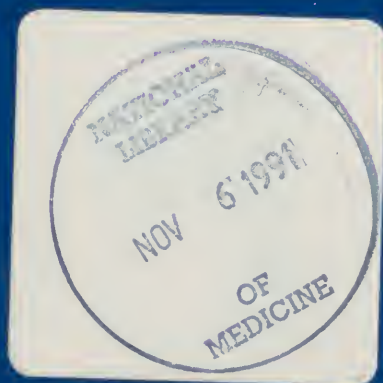
W1 MA76M 1991  
NO. 11  
2-----SEQ: SR0054434  
MARYLAND MEDICAL JOURNAL

# MMJ

Maryland Medical Journal  
NOVEMBER 1991

- *Needle-handling  
by Health Care  
Workers*
- *Pregnancy and  
Addiction*
- *PMS Update*
- *Leishmaniasis*
- *Roget: A  
Versatile  
Physician*

2  
NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA MD 20894



Endorsed by Med-Chi  
for Maryland Physicians

© 1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.

# Our Members Are Not Dying For A Free Tail.

Strangely enough, some companies are trying to sell Maryland physicians a professional liability policy that requires them to die or become permanently disabled in order to get a free tail. At Medical Mutual, our members can get a free tail while they are very much alive.

We make the tail available at no extra cost for those of you who are planning to retire from the practice of medicine after five consecutive years on our claims made and/or occurrence policy. If retirement is not in your plans, our tail is free at any age after 15 consecutive years on our claims made policy. As an added feature, you may step down from a higher rated specialty to a lower rated one with no tail charge for making the change.

Your broker or our Member Services Representatives can answer your questions about tail provisions for Medical Mutual members.

Of course, we also give a free tail in the event of your permanent disability or death.

We just don't think this should be your only choice.



Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193



# Central Laboratories

Established 1970

## *Partners for Quality Healthcare*

### **First in Quality:**

Central Laboratories is dedicated to providing outstanding service. Clients, our ultimate focus, motivate us to provide unmatched quality, reliability, consistency, and value. Our unique commitment is reflected in the exceptional level of technical proficiency, client support, and service we provide to all our customers. Quality assurance begins the minute the specimen is collected and continues throughout testing and reporting.

### **Continuous in Service:**

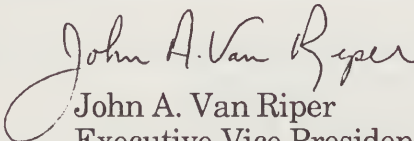
Our dedication to outstanding service compels us to provide for your individual needs. In doing so, we have expanded our operations to include **full service laboratory testing for Washington, D.C. and Suburban Maryland through our conveniently located Montgomery County Laboratory.** When it comes to **personalized laboratory testing services**, no one performs like Central Laboratories.

### **Continuous in Value:**

Our commitment to the highest quality laboratory services attainable is founded in our long tradition of service to the community. *Our innovative and progressive convictions differentiate us from our competitors and can provide for your laboratory needs today...and tomorrow.*



John H. Hebb, Jr., PhD.  
President



John A. Van Riper  
Executive Vice President

Phone our marketing department for information and a tour.

Baltimore Headquarters  
1920 Greenspring Drive  
Timonium, MD 21093  
(301) 252-6710  
(800) 331-2558

D.C. and Suburban MD  
15225 Shady Grove Road  
Rockville, MD 20850  
(301) 948-4527

---

# MetPath



*"Your Partner in Practice"*

---

## Quality

- Quality assurance program directed by our full time QA manager and our technical director.
- Control samples of up to 10% of our work load.
- Outside proficiency program results, available to you by request.

## Service

- Courteous client service, 24 hours a day.
- Flexible specimen pick-up schedules.
- Customized profiles and preprinted requisitions.
- Specialized report formats.

## Convenience

- Comprehensive testing.
  - 4 STAT labs.
  - 27 Patient Service Centers.
  - House call service in the Baltimore/Washington area.
- 

**Regional Headquarters**  
1550 East Gude Drive  
Rockville, MD 20850  
(301)340-9800  
(800)722-7393

**Baltimore**  
1246 East Joppa Road  
Baltimore, MD 21204  
(301)583-1500  
(800)426-1676

Lab tours are welcome! Call Sales for an appointment.

a **CORNING** Clinical Laboratory

---



---

# MMJ

## Maryland Medical Journal

---

NOVEMBER 1991

VOLUME 40 NO 11

### ARTICLES

#### **Multistate Investigation of Needle-handling by Health Care Workers . . . . . 989**

*Ronald G. Kaczmarek MD, MPH, Roscoe M. Moore, Jr. DVM, DSc, PhD, John McCrohan MS, Ebenezer Israel MD, MPH, Carolyn Caquelin RN, BS, and Charles Reynolds MS*

Multistate investigation suggests that most of the Centers for Disease Control's (CDC's) recommendations regarding needle handling have been implemented, but that needle recapping by health care workers remains a significant problem.

#### **Pregnancy and Addiction: Outcomes and Interventions . . . . . 995**

*Mary E. McCaul PhD, Dace S. Svikis PhD and Terry Feng MD*

Cocaine use by pregnant women has increased dramatically in recent years, resulting in well-documented consequences for mothers and offspring. However, even a once weekly peer-oriented intervention can have a positive impact on pregnancy outcome for drug-using women.

#### **Premenstrual Syndrome Update: 1991 . . . . . 1003**

*Ivan A. Backerman MD, FACOG*

Premenstrual syndrome (PMS) was first identified in 1931 and currently affects millions of women on a physical and emotional basis. However, Buspirone has been found to be a safe and markedly effective agent in the management of this condition.

#### **Leishmaniasis: An Undesirable Import . . . . . 1011**

*Suzanne Holmes Giannini PhD and Joseph W. Burnett MD*

The impact of leishmaniasis on public health is often underestimated. Prompt diagnosis and appropriate therapy may minimize the development of serious sequelae.

### MEDICAL HISTORY

#### **Roget: A Versatile Physician of the Nineteenth Century . . . . . 1013**

*Joseph M. Miller MD*

Peter Mark Roget, best known as the compiler of the *Thesaurus*, was also a physician, inventor, writer and scientist.



Maryland Medical Journal

1211 Cathedral Street  
Baltimore, MD 21201  
301 539-0872

---

#### Editor

Victor R. Hrehorovich MD

#### Associate Editor

Henry P. Laughlin MD, ScD, ScSD

#### Managing Editor

Janet Campbell MS, MS

#### Editorial Board

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Robert G. Knodell MD

Carmine M. Valente PhD (Advisory)

#### Art Director

Virginia Carter

#### Graphic Artist

Susan Ventura

#### Communications Assistant

Lori Robinson

---

#### Executive Director

Angelo J. Troisi FACHE

#### Communications Director

Michelle Burke MHSA

Copyright© 1991. MMJ Vol 40, No 11.  
The Maryland Medical Journal USPS  
332080. ISSN 0025-4363 is published  
monthly by the Medical and Chirurgical  
Faculty of Maryland and is a membership  
benefit. Subscription rates: U.S. and U.S.  
possessions, one year: nonmembers \$35;  
foreign \$42. Single copy: members \$5; non-  
members \$7. Second class postage paid at  
Baltimore, MD and at additional mailing of-  
fices. POSTMASTER: send address chan-  
ges to Maryland Medical Journal, 1211  
Cathedral St., Baltimore, MD 21201-  
5585. FAX 301-547-0915.

---

#### Advertisers

Contact: Network Publications Corp.  
2701 N. Charles St. - Ste. 400  
Baltimore, MD 21218  
(301-235-0500)  
FAX (301-235-0689)

The views in this publication are those of the authors and  
do not necessarily reflect the opinion of the Medical and  
Chirurgical Faculty of Maryland. Publishing an adver-  
tisement does not imply endorsement of any product or  
service offered, or approval of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

## DEPARTMENTS

Epidemiology and Disease Control Program . . .	971
<i>Prevention and Control of Influenza . . .</i>	
Executive Director's Newsletter . . . . .	979
Commentary . . . . .	1016
<i>Elimination of Preventable Blindness from Diabetes. . .</i>	
Imaging Case of the Month . . . . .	1018
<i>Acoustic Neuroma . . .</i>	
Board of Physician Quality Assurance Actions	1021
Auxiliary . . . . .	1029
<i>Component Society Presidents: 1991-1992 . . .</i>	

## MISCELLANY

Letters to the Editor . . . . .	984
<i>Histoplasmosis is Endemic in the Potomac River Valley, Potential for Missed Diagnosis in Rehabilitation Patients with a High-risk Lifestyle . . .</i>	
Physician Recognition Award . . . . .	985
Word Rounds . . . . .	1032
<i>Eponyms . . .</i>	
Members in the News . . . . .	1035
<i>Robert Wagner Gibson MD, Martin D. Weltz MD, FACP, James J. Ryan MD, John David Reeder MD . . .</i>	
Information for Authors . . . . .	1037
Book Review . . . . .	1037
<i>Clinical Neuro-Ophthalmology . . .</i>	
Annual Meeting . . . . .	1038
2nd Annual Conference on Addiction . . . . .	1040
CME Programs . . . . .	1041
Performing Arts Medicine Conference . . . . .	1044
Classified Ads . . . . .	1049

---

Cover design by Susan Ventura



# Maryland's newest physical rehab center already has 20 years experience.



Baltimore is a city known internationally for its outstanding medical care. Now the tradition continues with the addition of the new Maryland General-Bryn Mawr Rehab Center at Maryland General Hospital. This specialty center for physical medicine and rehabilitation offers Bryn Mawr Rehab's 20 years of experience and leadership in the field of rehabilitation medicine.

The partnership between Maryland General Hospital and Bryn Mawr Rehab is truly unique. For the first time in Maryland, two high quality institutions with long histories of health care achievement are coming together to make a major commitment to rehabilitation medicine.

The Maryland General-Bryn Mawr Rehab Center, the region's most modern and conveniently located rehabilitation facility, provides a continuum of care in physical and cognitive rehabilitation services

including brain injury, stroke, orthopedics, arthritis, amputee services and multiple sclerosis, among others.

Most importantly, everyone on the Maryland General-Bryn Mawr Rehab team is personally and professionally dedicated to helping patients reach their highest level of independence. Our guiding philosophy is team-centered care, focused upon the individual needs of our patients and their families. This is what makes Maryland General-Bryn Mawr Rehab Center a very special place for rehabilitation care.

To learn more about Maryland General-Bryn Mawr Rehab Center or to arrange a tour, please call Mary Filippelli our administrative director at (301) 225-8380.

Maryland General-Bryn Mawr Rehab Center. We're the new team in town with lots of experience.

 **MARYLAND GENERAL  
BRYN MAWR REHAB CENTER**

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380

# DIFFICULT DECISIONS

## An Older Person Exhibits The Following Psychopathology:



1. Depression, Bizarre Behavior, Schizophrenia
2. Severe Anxiety, Mania, Functional or Organic Psychoses
3. Impulsivity, Eating Disorders, Severe Obsessions/Compulsions
4. Addictions in Conjunction with Other Psychiatric Disorders

## What Is An Effective Therapeutic Response?



### The Geropsychiatric Program At Taylor Manor Hospital

In response to the growing population of older persons who suffer from a treatable mental illness, Taylor Manor Hospital announces the expansion of our Geropsychiatric Program. Now, older patients who may have reversible dementia, affective disorder, depressive illness and addictions accompanied by psychiatric symptoms, will benefit from the comprehensive assessment and treatment provided by our multi-disciplinary team of geriatric specialists.

Admission criteria to the Geropsychiatric Program are as follows: patients must be age 65 or older (unless suffering from premature pathological aging), must exhibit moderate to severe emotional, behavioral, intellectual, or neurological impairment, or pose a danger to themselves and/or others. Length of stay depends upon the nature of the illness and responsiveness to treatment.

Each patient receives highly individualized attention through individual and group therapy, as well as educational groups and an array of multi-modal programs addressing specific problems. The referring professional is closely consulted at every stage of therapy -- including the initial consultation and our in-depth diagnostic evaluation -- to ensure that the individual is placed in the most appropriate treatment setting. Taylor Manor Hospital also provides specialized medical attention, if needed, through agreements with local hospitals, following consultation with the referral source.

Aftercare treatment is coordinated by a staff social worker, in close cooperation with the referring professional. Because of the importance we place on effective continuity of care, our affiliated network of conveniently located outpatient treatment centers (Taylor Mental Health Services), is available to patients after discharge at the discretion of the referring professional. Our common goal is to restore seniors to their maximum emotional well-being, by providing personal support and practical help in an atmosphere of consideration, respect, and caring.



## *Taylor Manor Hospital*

ELLICOTT CITY, MD 21041-0396

(301) 465-3322 • 1-800-527-8238



# If There is Alzheimer's Disease...

**Church Home** has been caring for men and women with Alzheimer's Disease since 1987 in a small and very special place we call the Broadway Wing.

The Wing is physically separate from Church Home but, like the Home, directly connected to Church Hospital. It is restful and secure. There are 22 private rooms and an enclosed garden. Nowhere in the Baltimore area is there a nursing staff better prepared—by training, experience, and temperament—for their profession.

One monthly charge covers virtually everything. There will be no hospital bills, no doctors' bills, no bills for medicines. And there is no entrance fee.

For more information or to arrange a visit to the Broadway Wing, call 732-1410.

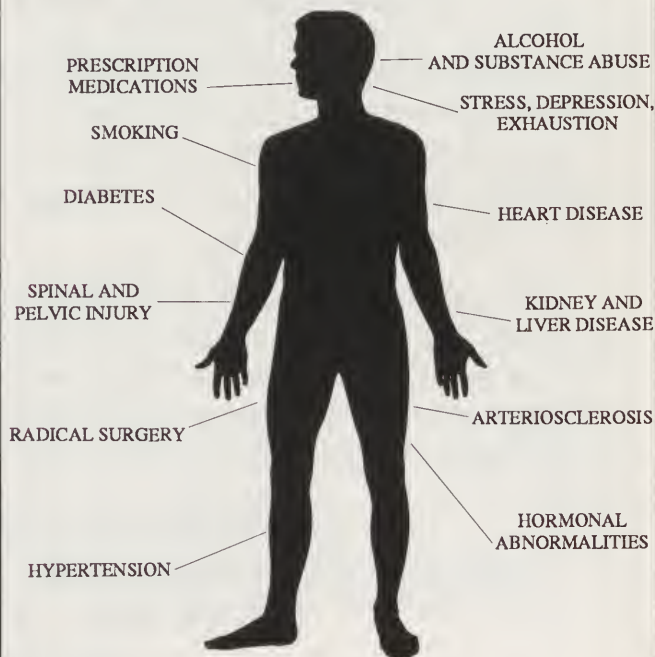


**Church  
Home**

The Broadway Wing  
101 N. Bond Street • Baltimore MD

*A subsidiary of Church Home & Hospital, founded in 1857*

## Impotence: Whatever The Cause...



## We Have The Treatment.

- Counseling
- Drug-Injection Therapy
- Mechanical Devices
- Medications
- Prosthesis
- Revascularization

Maryland's first health center dedicated solely to the comprehensive diagnosis and treatment of impotence. Physicians and patients now have an answer.



1104 Kenilworth Drive • Suite 406  
Baltimore, MD 21204

**1-301-296-MRIC**  
**1-800-955-MRIC**

## With Malpractice Insurance Premiums on the rise, why settle for anything less than the best available coverage?

The downward trend in malpractice insurance premiums has broken and prices are on their way back up. Should a physician choose between insurers only on price? Of course not. But there are a number of quality choices between carriers and products. You should get the most from your premium dollars.

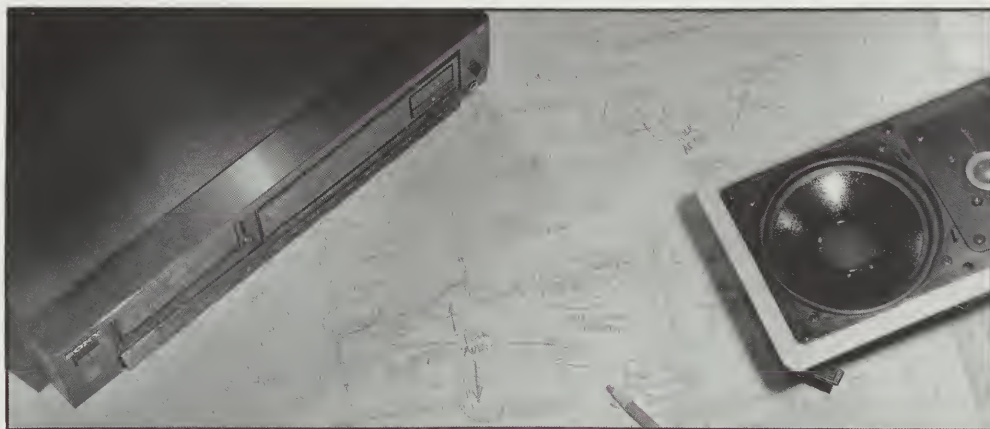
Let us compare the available products and prices for you. There is no charge or obligation. For written quotations and comparisons call us or send us a copy of your malpractice policy. Let us show you why hundreds of Maryland physicians rely on us for their malpractice coverage. You need a broker you can rely on.

### **Contemporary Insurance Services**

1000 Connecticut Avenue, N.W., Suite 1112, Washington, D.C. 20036

(202) 887-5563 • Toll Free 1-800-658-8943

FAX (202) 452-6093



## **The Audio Architects.**

For a complete home Audio/Video System, call the experts at Sound-scape. Our specialists work directly with your designers and architects to custom design a system that fits your needs and tastes. Whether you're building or remodeling, just bring us your plans and we'll do the rest.

 **SOUNDSCAPE®**

406 West Cold Spring Lane in Roland Park, 889-1134 • 202 West Fayette Street at Park Ave., 727-1134

*Infinity • Polk • Denon • Bang & Olufsen • Carver • NAD • Sony ES • Aragon • Conrad-Johnson • Adcom • Paradigm • Vandersteen • Yamaha*





# EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

November, 1991

## Prevention and Control of Influenza

### Influenza in Maryland 1990 - 1991

During the past influenza season (Nov 1990 - Apr 1991) 42 influenza isolates were reported in Maryland. The majority were reported by the Department of Health and Mental Hygiene laboratory. Fourteen (33%) were identified as influenza A and 28 (67%) as influenza B. Three influenza A isolates were A/Beijing(H3N2), not a component of the 1990-1991 vaccine. Nineteen isolates were characterized as B/Yamagata/16/88-like, a component of the 1990-1991 vaccine. During the first part of the influenza season, Maryland isolates were almost exclusively influenza B, and therefore amantadine was not recommended. Influenza A predominated in Maryland in March and April. This pattern of influenza B followed by the later appearance of influenza A was seen in many areas of the country.

A total of 38 outbreaks of upper respiratory illness was reported during the influenza season. Many of these could be characterized as influenza-like illness, that is, patients were reported to have both cough and fever exceeding 100°F. Influenza B was identified as the agent in 8 outbreaks and influenza A in one. All 8 influenza B outbreaks occurred in nursing homes.

The 1990-1991 influenza season in Maryland contrasted with the previous (1989-1990) season where only influenza A was isolated, and outbreaks peaked early in the season. During the 1988-1989 influenza season, viral types were more evenly mixed (41% A, 59% B) and outbreaks peaked late in the season.

Two measures available in the U.S. that can reduce the impact of influenza are immunoprophylaxis with inactivated (killed-virus) vaccine and chemo-

prophylaxis or therapy with an influenza-specific antiviral drug (e.g., amantadine). Vaccination of high-risk persons each year before the influenza season is currently the most effective measure for reducing the impact of influenza. Annual vaccination using the current vaccine is necessary because the immunity for an individual declines in the years following vaccination. In addition, because the 1991-1992 vaccine differs from the 1990-1991 vaccine, only the 1991-1992 vaccine should be used to provide protection for the upcoming influenza season.

### ACIP RECOMMENDATIONS

*The following Immunization Practices Advisory Committee (ACIP) recommendations have been condensed from the CDC. MMWR 1991; 40(RR-6):1-15. They include information on the vaccine and antiviral agents available for controlling influenza during the 1991-1992 influenza season (superseding both the MMWR 1990; 39 (no. RR-7):1-15 and the clarification, MMWR 1990; 39:469). The primary changes include statements about the influenza strains in the trivalent vaccine for 1991-1992.*

**TABLE 1. Influenza vaccine\* dosage, by patient age — United States, 1991-92 season**

Age group	Product†	Dosage	No. doses	Route‡
6-35 mos.	Split virus only	0.25 mL	1 or 2¶	IM
3-8 yrs.	Split virus only	0.50 mL	1 or 2¶	IM
9-12 yrs.	Split virus only	0.50 mL	1	IM
≥12 yrs.	Whole or split virus	0.50 mL	1	IM

\*Contains 15µg each of A/Taiwan/1/86-like (H1N1), A/Beijing/353/89 (H3N2), and B/Panama/45/90-like hemagglutinin antigens in each 0.5 mL. Manufacturers include: Connaught Laboratories, Inc. (distributed by E.R. Squibb & Sons, Inc.) (Fluzone® whole or split); Evans Medical Ltd.-Lederle Laboratories (distributed by Lederle Laboratories) (Flu-Imune® purified surface antigen vaccine); Parke-Davis (Fluogen® split); and Wyeth-Ayerst Laboratories (Influenza Virus Vaccine, Trivalent® split). For further product information call Connaught, (800) 822-2463; Lederle, (800) 522-3753; Parke-Davis, (800) 233-0432; Wyeth-Ayerst, (800) 950-5099.

†Because of the lower potential for causing febrile reactions, only split-virus vaccines should be used for children. They may be labeled as "split," "subviroin," or "purified-surface-antigen" vaccine. Immunogenicity and side effects of split- and whole-virus vaccines are similar for adults when vaccines are used at the recommended dosage.

‡The recommended site of vaccination is the deltoid muscle for adults and older children. The preferred site for infants and young children is the anterolateral aspect of the thigh.

¶Two doses are recommended for children <9 years of age who are receiving influenza vaccine for the first time.

## I. RECOMMENDATIONS FOR USE OF INFLUENZA VACCINE

The trivalent influenza vaccine prepared for the 1991-1992 season will include A/Taiwan/1/86-like (H1N1), A/Beijing/353/89-like (H3N2), and B/Panama/45/90-like hemagglutinin antigens. Recommended doses are listed in Table 1.

Two doses may be required for a satisfactory antibody response among previously unvaccinated children <9 years of age; however, studies with vaccines similar to those in current use have shown little or no improvement in antibody responses when a second dose is given to adults during the same season.

During the past decade, data on influenza immunogenicity and side effects have been obtained when vaccine has been administered intramuscularly. Because there has been no adequate evaluation of recent influenza vaccines administered by other routes, the intramuscular route is the one recommended for use. Adults and older children should be vaccinated in the deltoid muscle, and infants and young children in the anterolateral aspect of the thigh.

### Target Groups for Special Vaccination Programs

To maximize protection of high-risk persons, they and their close contacts should be targeted for organized vaccination programs.

#### Groups at Increased Risk for Influenza-Related Complications

1. Persons  $\geq$  65 years of age.
2. Residents of nursing homes and other chronic-care facilities housing persons of any age with chronic medical conditions.
3. Adults and children with chronic disorders of the pulmonary or cardiovascular systems, including children with asthma.
4. Adults and children who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications).
5. Children and teenagers (6 months-18 years of age) who are receiving long-term aspirin therapy, and therefore may be at risk of developing Reye syndrome after influenza.

#### Groups That Can Transmit Influenza to High-Risk Persons

1. Physicians, nurses, and other personnel in both hospital and out patient-care settings who have contact with high-risk persons among all age groups, including infants.

2. Employees of nursing homes and chronic-care facilities who have contact with patients or residents.

3. Providers of home care to high-risk persons (e.g., visiting nurses, volunteer workers).

4. Household members (including children) of high-risk persons.

### Persons Who Should Not Be Vaccinated

Inactivated influenza vaccine should not be given to persons known to have anaphylactic hypersensitivity to eggs.

Persons with acute febrile illnesses usually should not be vaccinated until their symptoms have abated.

### Simultaneous Administration of Other Vaccines, Including Childhood Vaccines

The target groups for influenza and pneumococcal vaccination overlap considerably. Both vaccines can be given at the same time at different sites without increasing side effects. However, influenza vaccine must be given each year; with few exceptions, pneumococcal vaccine should be given only once.

Children at high risk for influenza-related complications may receive influenza vaccine at the same time as measles-mumps-rubella, *Haemophilus b*, pneumococcal, and oral polio vaccines. Vaccines should be given at different sites. Influenza vaccine should not be given within 3 days of vaccination with pertussis vaccine.

## II. RECOMMENDATIONS FOR THE USE OF AMANTADINE

Amantadine hydrochloride interferes with the replication cycle of type A (but not type B) influenza viruses, although the specific mechanisms of its antiviral activity are not completely understood. When given prophylactically to healthy young adults or children in advance of and throughout the epidemic period, amantadine is approximately 70-90% effective in preventing illnesses caused by naturally occurring strains of type A influenza viruses. When administered to otherwise healthy young adults and children for symptomatic treatment within 48 hours after the onset of influenza illness, amantadine has been shown to reduce the duration of fever and other systemic symptoms and may permit a more rapid return to routine daily activities. Since antiviral agents taken prophylactically may prevent illness but not subclinical infection, some persons who take these drugs may still develop immune responses that will protect them when exposed to antigenically related viruses in later years.

As with all drugs, side effects may occur among a small proportion of persons. Such symptoms are rarely severe, but may be important for some categories of patients.

**Amantadine is recommended for the following:**



## Outbreak Control in Institutions

When amantadine is used for outbreak control, it should be administered to all residents of the affected institution regardless of whether they received influenza vaccine the previous fall. Chemoprophylaxis should also be offered to unvaccinated staff who provide care to high-risk persons.

### Use as Prophylaxis

- High-risk individuals vaccinated after influenza A activity has begun
- Persons providing care to high-risk persons
- Immunodeficient persons
- Persons for whom influenza vaccine is contraindicated

- Others who wish to avoid influenza A illness.

### Use as Therapy

Although amantadine can reduce the severity and shorten the duration of influenza A illness among healthy adults, there are no data on the efficacy of amantadine therapy in preventing complications of influenza A among high-risk persons. Therefore, no specific recommendations can be made regarding the therapeutic use of amantadine for these patients. This does not preclude physicians from using amantadine for high-risk patients who develop illness compatible with influenza during a period of known or suspected influenza A activity in the community. Whether amantadine is effective when treatment begins beyond the first 48 hours of illness is not known.

\*\*\*\*\*

*The "Important Information about Influenza and Influenza Vaccine, (1991-1992)" below and on the next page, is the "official" centers for Disease Control statement and consent form for influenza vaccine use. Please reproduce for your office use or contact the Immunization Division, DHMH, for an additional copy for reproduction, (301) 225-6679.*

## IMPORTANT INFORMATION ABOUT INFLUENZA AND INFLUENZA VACCINE, (1991-1992)

*Please read this carefully*

Influenza  
7/1/91

### WHAT IS INFLUENZA ("FLU")?

Influenza (or "flu") is a viral infection of the nose, throat, bronchial tubes, and lungs that can make someone of any age ill. Usually the flu occurs in the United States from about November to April. If you get the flu, you usually have fever, chills, cough, and soreness and aching in your back, arms, and legs. Although most people are ill for only a few days, some persons have a much more serious illness and may need to go to the hospital. On average, thousands of people die each year in the United States from the flu or related complications.

### WHO SHOULD GET INFLUENZA VACCINE?

Because influenza is usually not life threatening in healthy individuals and most people recover fully, health officials emphasize the use of vaccine for the elderly and people with other health problems which make these individuals more likely to be seriously ill or to die from the flu or its complications. For example, people who after even light exercise become short of breath due to diseases affecting their heart or lungs, and people who have low resistance to infections, are likely to be more seriously affected by the flu. Thus, the following groups are at increased risk for serious illness with the flu and should receive vaccine:

- Healthy people 65 years of age and older.
- Adults and children with long-term heart or lung problems which caused them to see a doctor regularly, or to be admitted to a hospital for care during the past year.
- Residents of nursing homes, and other institutions housing patients of any age who have serious long-term health problems.
- People of any age who during the past year have regularly seen a doctor or have been admitted to a hospital for treatment for kidney

disease, cystic fibrosis, chronic metabolic diseases such as diabetes, anemia ("low blood"), or severe asthma.

- People who have a type of cancer or immunological disorder (or use certain types of medicines) that lowers the body's normal resistance to infections. (Because influenza might cause serious illness and complications in persons infected with the AIDS virus, these individuals should receive influenza vaccine.)
- Children and teenagers (6 months through 18 years of age) on long-term treatment with aspirin who, if they catch the flu, may be at risk of getting Reye's syndrome (a childhood disease that causes coma, liver damage, and death).

Medical staff who provide care to high-risk patients in health-care facilities should be vaccinated, to reduce the possibility that these patients might catch the flu when receiving medical care. Family members or others who provide care to high-risk persons at home should also be vaccinated. The possibility for spreading the flu to high-risk persons can be reduced by vaccinating:

- Doctors, nurses, and others in both hospital and outpatient-care settings who have contact with high-risk patients in all age groups, including children.
- Personnel of nursing homes and chronic-care facilities who have contact with patients or residents.
- Individuals who provide care to high-risk persons at home, such as visiting nurses and volunteers, as well as all household members, including children, whether or not they are providers of care.

In addition, a flu shot may be given to:

- Persons wishing to reduce their chances of catching the flu.
- Persons who provide essential community services.

*(PLEASE READ OTHER SIDE)*

- Students or other persons in schools and colleges if outbreaks would cause major disruptions of school activities.
- Persons traveling to the tropics at any time of the year or to countries south of the equator during April - September. (Persons with high-risk medical conditions and those ages 65 and older who are traveling as indicated above especially should be encouraged to receive vaccine.)

**INFLUENZA VACCINE:**

The viruses that cause flu frequently change, so people who have been infected or given a flu shot in previous years may become infected with a new strain. Because of this, and because any immunity produced by the flu shot will possibly decrease in the year after vaccination, persons in the high-risk groups listed above should be vaccinated every year. This year's flu shot contains the strains A/Taiwan/1/86-like, A/Beijing/353/89-like, and B/Panama/45/90-like to provide immunity against the types of flu which have been circulating in the past year, and/or thought to be most likely to occur in the United States next winter. All the viruses in the vaccine are killed so that they cannot infect anyone. Vaccine will begin to provide its protective effect after about one or two weeks, and immunity may decrease, on average, after several months. Flu shots will not protect all persons who get them against the flu. They also will not protect against other illnesses that resemble the flu.

**DOSAGE:**

Only a single flu shot is needed each season for persons 9 years of age and older, but children less than 9 years of age may need a second shot after about a month. The doctor or nurse giving the flu shot will discuss this with parents or guardians. Children less than 13 years old should be given only vaccine that has been chemically treated during manufacture (split virus) to reduce chances of any side effects. Split-virus vaccines can also be used by adults.

**POSSIBLE SIDE EFFECTS FROM THE VACCINE:**

Most people have no side effects from recent influenza vaccines. Flu shots are given by injection, usually into a muscle of the upper arm.

This may cause soreness for a day or two at the injection site and occasionally may also cause a fever or achiness for one or two days. Unlike 1976 swine flu vaccine, recent flu shots have not been clearly linked to the paralytic illness Guillain-Barré syndrome. As is the case with most drugs or vaccines, there is a possibility that allergic or more serious reactions, or even death, could occur with the flu shot.

**SIMULTANEOUS USE OF OTHER VACCINES:**

The target groups for influenza and pneumococcal vaccination overlap. Both vaccines can be given at the same time at different sites without increasing side effects. High-risk children may also receive influenza vaccine at the same time as measles, mumps, rubella, *Haemophilus influenzae* type b, and oral poliovirus vaccines, but at different sites. Influenza vaccine should not be given within 3 days of vaccination with pertussis vaccine.

**WARNING! SOME PEOPLE SHOULD CHECK WITH A DOCTOR BEFORE TAKING INFLUENZA VACCINE:**

- Persons who should not be given the flu shot include those with an allergy to eggs that causes dangerous reactions if they eat eggs.
- Anyone who has ever been paralyzed with Guillain-Barré syndrome should seek advice from their doctor about special risks that might exist in their cases.
- Women who are or might be pregnant should consult with their doctor.
- Persons who are ill and have a fever should delay vaccination until the fever and other temporary symptoms have gone.

**QUESTIONS:**

If you have any questions about influenza or influenza vaccination, please ask now or call your doctor before requesting the vaccine.

**REACTIONS:**

If anyone receiving influenza vaccine gets sick and visits a doctor, hospital, or clinic in the 4 weeks after vaccination, please report this to: **the clinic where this vaccine was administered or to your local health department.**

**PLEASE KEEP THIS PART OF THE INFORMATION SHEET FOR YOUR RECORDS**

*I have read or have had explained to me the information on this form about influenza and influenza vaccine. I have had a chance to ask questions which were answered to my satisfaction. I believe I understand the benefits and risks of influenza vaccine and request that the vaccine be given to me or to the person named below for whom I am authorized to make this request.*

Influenza  
7/1/91

INFORMATION ABOUT PERSON TO RECEIVE VACCINE (Please Print)						FOR CLINIC USE			
Name: Last			First		MI	Birthdate:	Age:	Clinic Identification:	
Address: Street					County:			Date Vaccinated:	
City			State			Zip			Manuf. and Lot No.:
Signature of person to receive vaccine or person authorized to make the request:									Site of Injection:
X _____ Date: _____									

FOR DATA PROCESSING USE ONLY (OPTIONAL)

VACCINE HISTORY: <input type="checkbox"/> Place check in box if history previously submitted.									
DTP:					HAEMOPHILUS bPV:		HAEMOPHILUS bCV:		
_____ m d yr m d yr m d yr m d yr m d yr					_____ m d yr m d yr		_____ m d yr		
POLIO:					MEASLES:		MUMPS:		RUBELLA:
_____ m d yr m d yr m d yr m d yr m d yr					_____ m d yr		_____ m d yr		_____ m d yr



# Our Pictures Are Worth A Thousand Words.™

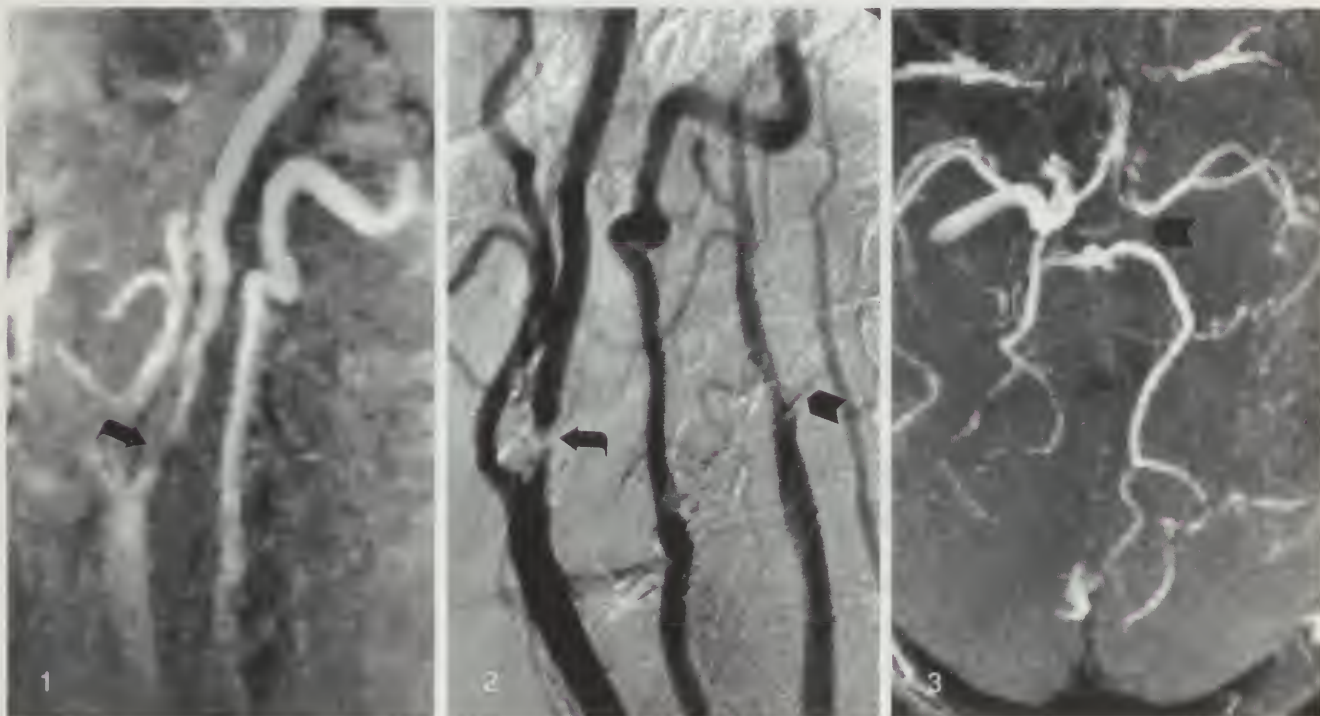
## Case #17

A 66 year old female with transient episodes of left arm and leg weakness.

**DIAGNOSIS: Severe stenosis proximal right internal carotid artery and occlusion left internal carotid artery as diagnosed by MRA — Magnetic Resonance Angiography.**

Figure 1 MRA image demonstrates marked stenosis of the proximal right internal carotid artery (arrow) which closely correlates to the high grade stenosis demonstrated by digital subtraction angiography (arrow Figure 2). Figure 3, a base view MRA through the Circle of Willis, demonstrates absence of signal within the left internal carotid artery (arrowhead). This corresponds with the occlusion of the left internal artery demonstrated in Figure 2 by DSA (arrowhead).

MRA provides a non-invasive, 3-dimensional study of the extracranial carotid arteries and Circle of Willis without the associated risks of catheterization or injection of contrast media. It is a sensitive and extremely safe screening technique for patients with extracranial or intracranial atherosclerotic disease. The study is performed as an adjunct to cranial Magnetic Resonance Imaging requiring only six to eight minutes of scan time. This technique is also useful in evaluating aneurysms and vascular malformations as well as vertebrobasilar disease.



At Drs. Copeland, Hyman & Shackman, P.A. we are proud of our high resolution, state-of-the-art imaging. We look forward to consulting with you on any diagnostic imaging procedure in order to best serve you and your patients in the most expeditious and economic manner.



We provide convenient evening and week-end hours at both MRI locations, double-readings for quality assurance, and FAX capabilities for delivering reports immediately.

**You work hard to gain your patients' trust and confidence. At Drs. Copeland, Hyman & Shackman, we'll help you keep it.**

## Drs. Copeland, Hyman & Shackman P.A.

MRI Examinations available at:

Pomona Square Suite 119  
1700 Reisterstown Rd.  
(301) 486-8830

White Square Imaging Center  
9105 Franklin Square Drive  
(301) 574-8880

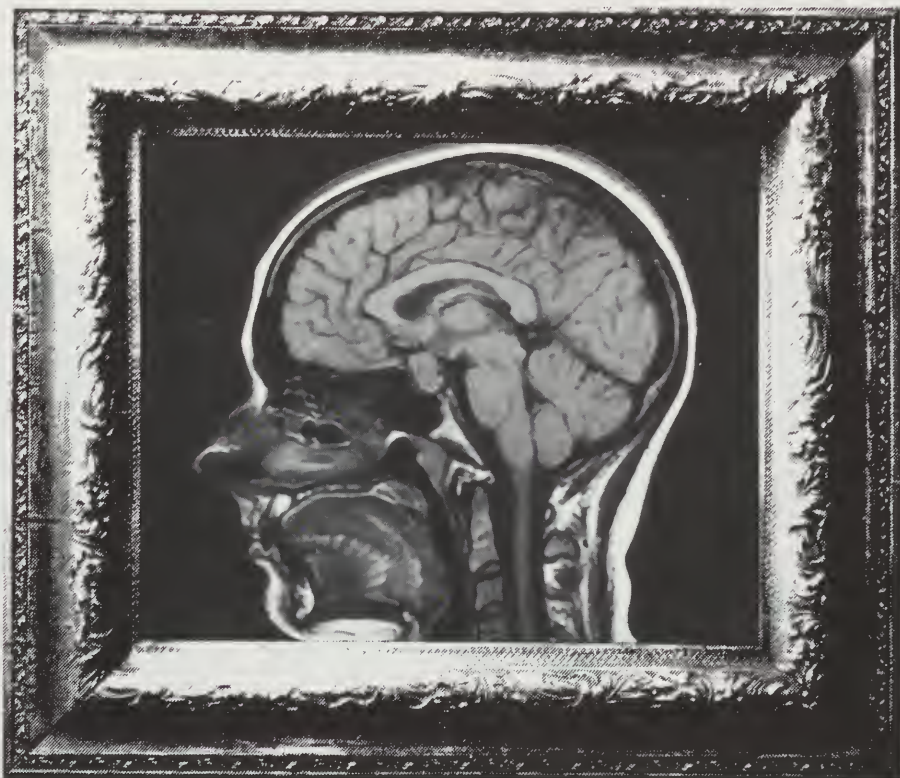
Harford Imaging Center  
104 Plumtree Rd./Bel Air  
(301) 515-4000

---

**Drs. Copeland, Hyman & Shackman are pleased to announce the Harford Imaging Center is now open, providing MRI, CT, nuclear medicine, ultrasound, low-dose mammography and general x-ray services.**

---

# STATE OF THE ART



---

## DIAGNOSTIC TECHNOLOGY

---

Magnetic resonance imaging (MRI) is an important tool for today's physician. MRI produces VIVID images of the body in multiple planes. It is a painless procedure that does not involve surgery or potentially harmful radiation. MRI is frequently recommended for evaluation of neural, spinal, articular and pelvic disorders. It is safe and cost effective, and its various applications are being expanded at an impressive rate.

Health Images facilities are a community resource available to all area physicians.

---

### **Southwest Magnetic Imaging**

6001 Harris Parkway  
Ft. Worth, TX 76132  
(817) 294-1131

---



The MRI Company



# *Catastrophic Illness is Rare and the Treatment is Critical.*

You know the patient. The one with chronic psychosis that hasn't responded to general inpatient care. The patient has comprehensive coverage so you've been able to admit him time and time again for inpatient care. But there's been little if any improvement, and you're frustrated. It's time to refer him to a hospital that is committed to treating the long term refractory patient and has the resources to do it. Sheppard Pratt.

Today's literature discourages long term hospitalization, and we agree. That same literature does, however acknowledge that a small group of chronic patients cannot be treated any other way. In 1984, Sheppard Pratt opened an 18 bed unit that treats only those types of patients.

We are not talking about custodial care nor do we treat patients who spend years talking about delusions. We provide long term, active, behavioral, psychopharmacological treatment for those patients who can genuinely be helped.

In addition to managing systematic and aggressive medication trials, our patients live within an established token economy. Patient education and social skills programming, and specialized activity therapy are provided daily throughout treatment. Formalized psychoeducation is also a vital component of treatment and family involvement. Comprehensive discharge planning is given attention equal to inpatient care. Sheppard Pratt provides many options for aftercare including a quarterway house, supervised housing, vocational training, outpatient therapy and medications management, and day hospitals.

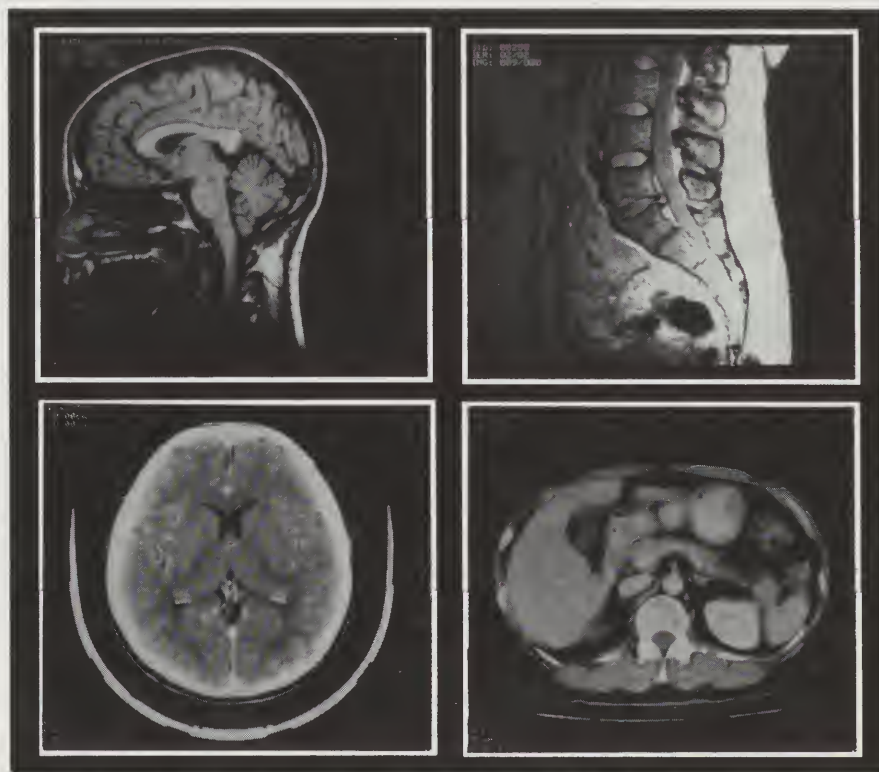
Sheppard Pratt is a comprehensive network of psychiatric services. In addition to our 322 bed hospital we maintain the 16 bed Mt. Airy House, numerous community outreach programs and the National Center for Human Development. For more than 100 years, Sheppard Pratt has earned its reputation for providing quality care to the chronically ill patient. And during these difficult economic times, we remain loyal to that heritage.

For further information or to make a referral contact the Adult Admissions Office at:  
(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

■ *Sheppard Pratt*  
A not-for-profit health system



# TOWSON IMAGING CENTER



## NOW OPEN!

*(A Local Physician Partnership)*

A FULL SERVICE DIAGNOSTIC CENTER OFFERING STATE-OF-THE-ART EQUIPMENT:

**MRI — G.E. 1.5T Signa Advantage high field strength magnet with  
MR — Angiography**

High resolution images of head, body and musculo-skeletal system.

**CT — G.E. Pace Plus**

Head and whole body imaging.

**RADIOGRAPHY**

- Now taking appointments
- Same Day scheduling
- Same day reporting
- Physician consultation with radiologist available
- Duplicate films provided



**TOWSON  
IMAGING  
CENTER**

1304 Bellona Avenue  
Charles and Beltway  
Lutherville, MD 21093  
Phone: (301) 825-3500  
FAX: (301) 825-3509

*Quality Service to Our Physicians and Patients!*



# *Executive Director's Newsletter*

November 1991

---

## *Med Chi Semiannual Meeting Actions*

---

Dominating the agenda at Med Chi's Semiannual Meeting in Ocean City this year were three major policy issues: mammography screening, radiation technologist qualifications and HIV testing. During special sessions at the meeting, Med Chi members and expert panels dedicated time to discussing these issues in order to formulate Med Chi policy on each of them.

### *Mammography Screening*

The issue of mammography screening involves promulgation of the standards outlined in House Bill 408, the preamble of which reads:

"Whereas, 1 in 10 women will get breast cancer; and

Whereas, Mammograms, if taken by faulty equipment or read by unqualified personnel, could threaten the lives of Maryland citizens with excessive radiation and the failure to detect treatable cancer; and

Whereas, The citizens of Maryland should be receiving consistently high quality mammograms delivered by qualified health care professionals using safe and accurate equipment, regardless of their geographic location in the State; and

Whereas, With the expected increase in the number of mammography testing centers in Maryland and on a nationwide basis, standards and criteria should be established for mammography testing and equipment..."

After a discussion by the panel members, including Henry Maganzini MD, Chairperson of Med Chi's Committee on Public Health, and Lawrence E. Holder MD, FACR, President, Maryland Radiological Society, the Med Chi House of Delegates accepted the report of the special ad hoc committee which supports the American College of Radiology's standards and the Health Care Financing Administration's standards for mammography screening. This vote includes the recommendations that no other standards be developed at this time and is supported by the Maryland Hospital Association. For a copy of Med Chi's issue packet on Mammography Screenings, contact Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056.

### *Radiation Technologists*

Related, in part, to the equipment and dosage standards for mammography screening, is the issue of radiation technologist qualifications, also contained in HB 408. At the panel discussion, this issue resulted in the House of Delegates accepting the report of the special ad hoc committee which recommended that an x-ray assistant be an individual who will not be a radiation technologist but rather a medical assistant who would take x-rays in a medical office under a physician's supervision. Training for x-ray assistants would assure safety to both patients and staff. For a copy of Med Chi's issue packet on x-ray assistants, contact Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056.

### *Practice Protocol for Physicians with HIV*

Med Chi's Committee on AIDS, in consultation with the Centers for Disease Control (CDC), the Maryland Hospital Association, and the Department of Health and Mental Hygiene, developed a practice protocol for physicians who are infected with HIV, in accordance with House Bill 124 passed by the Maryland General Assembly during its 1991 session.

The protocol outlines the procedures that infected physicians should follow

in order to determine what, if any, limitations would be placed on their practice if they are infected with HIV. These steps include appearing before an expert panel, signing an advocacy contract and refraining from the performance of invasive procedures in some cases. In addition, the protocol defines "HIV Positive Physician" and "High Risk Procedures." The protocol is consistent with the CDC guidelines and does not recommend mandatory testing.

Two sections in the protocol on the advocacy contract and physician compliance were extracted from the protocol to be reviewed by Med Chi's legal counsel and to be evaluated by Med Chi's Council on November 21, 1991. Pending Council approval, the protocol will be forwarded to the Maryland Legislature on December 2, 1991. Med Chi will closely monitor its progress from there and keep physicians in Maryland informed on this critical issue. For a copy of Med Chi's Practice Protocol for Physicians with HIV, contact Med Chi's Communications Department at 301-539-0872 or 1-800-492-1056.

---

### *Certification of Medical Radiation Technologists and Nuclear Medical Technologists*

---

Please be advised that the Board of Physician Quality Assurance (BPQA) anticipates that the enforcement date of Regulations .01-.11 under COMAR 10.32.10, Certification of Medical Radiation Technologists and Nuclear Medicine Technologists, will be January 2, 1992.

This means that an individual may not practice medical radiation technology or nuclear medical technology unless certified or temporarily certified by the BPQA by January 2, 1992.

---

### *Mandatory Testing of Health Care Workers*

---

On September 20, Governor Schaefer told his new AIDS Advisory Council that he favors mandatory testing of health care workers and patients for HIV. Med Chi's Committee on AIDS is currently studying implications of the Governor's proposal and intends to initiate a campaign to educate legislators and Maryland citizens on the data surrounding HIV transmission from physician to patient and the costs of a mandatory testing program. All physicians are encouraged to write to their Maryland legislators and urge them to oppose mandatory testing of HIV. Watch the *Executive Director's Newsletter* for more information regarding this issue or contact Betsy Newman, Med Chi Public Relations Director, at 301-539-0872 or 1-800-492-1056.

---

### *President's Regional Conference-Western Maryland*

---

Many physician members representing the five western Maryland counties attended Med Chi's President's Regional Conference in Hagerstown on October 3, 1991. During the meeting, President J. David Nagel MD presented updates on several critical Med Chi issues including HIV testing, mammography regulations and x-ray assistant guidelines. Med Chi thanks Frederick County Medical Society President, Henry P. Laughlin MD, ScD, ScSD, and Washington County Medical Society President, John G. Newby MD, for serving as co-hosts for the conference.

---

### *Drug Conference*

---

Med Chi's "Second Annual Conference on Addiction: Prevention, Recognition and Treatment" will be held on Saturday, November 16, 1991 in the Med Chi Faculty Building. The conference will help physicians care for patients with addiction problems and fulfills seven continuing medical education credits. The first 150 registrants to the conference will receive a free copy of the 1990 addiction conference monograph. A program and a registration form appear on page 1040 of this MMJ.



GENERIC NAME	BRAND NAME
--------------	------------

#### 0:12.16 Hemostatics

*Listed products only.*

Antihemophilic Factor Factor IX	Hemofilm, Profilate Konyne HT
------------------------------------	----------------------------------

#### 4:04 \*\* Cardiac Drugs

Nicardipine HCl*	Cardene
Betaxolol HCl*	Kerlone
Mexilitene HCl*	Mexitil

#### 4:06 Antilipemic Agents

Cholestyramine	Questran
Clofibrate	Atromid S
Colestipol HCl	Colestid
Dextrothyroxine Sodium	Cholexin
Gemfibrozil	Lipid
Lovastatin	Mevacor
Niacin	
Probucol	Lorelco

#### 4:08\*\* Hypotensive Drugs

Doxazosin Mesylate*	Cardura
Guanfacin HCL*	Tenex
Terazosin*	Hytrin

#### 4:12\*\* Vasodilating Agents

Dipyridamole - *Only for the following indication: As an adjunct to coumarin anticoagulants in the prevention of postoperative thromboembolic complications of cardiac valve replacement. Only the following manufacturers products: Barr, Boehringer-Ingelheim, Lederle, Purepac. The notation of the indication must accompany the order. Products from other manufacturers or use for any other indications is not payable.*

#### 4:08.04 \*\* Non-steroidal Anti-inflammatory Agents

Etodolac	Lodine
Flurbiprofen	Ansaid

#### 4:08.08 \* Opiate Agonists

*Listed products only.*

*Only for treatment of debilitating chronic pain, sole active ingredient only, or oral products in combination with aspirin or acetaminophen. No cough syrups are covered.*

Codeine Phosphate, Sulfate	
Fentanyl (transdermal patches only)	Duragesic
Hydrocodone Bitartrate	Anexia, Vicodin
Hydromorphone HCl	Dilaudid
Levorphanol Tartrate	Levo-Dromoran
Meperidine HCl	Demerol
Methadone HCl	Dolophine
Morphine Sulfate	MSRI, Roxanol
Opium Preparations	
Oxymorphone HCl	Numorphan

\* allowed in up to a 100 days supply

GENERIC NAME	BRAND NAME
--------------	------------

#### 28:12.08 Benzodiazepines

*Listed products only*

*For anticonvulsive therapy only. (See also 28:24.08)*

Clonazepam	Klonopin
Clorazepate	Tranxene

#### 28:16.08\* Tranquilizers

Triflupromazine	Vesprin
-----------------	---------

#### 28:20 Respiratory and Cerebral Stimulants

*Listed products only.*

*Only for the treatment of narcolepsy, or attention deficit disorder in individuals under 16 years of age.*

Methylphenidate	Ritalin
Dextroamphetamine	Dexedrine

#### 28:24.08 Benzodiazepines

*Listed products only*

*Only for listed indications. (See also 28:12.08)*

Alprazolam	Xanax (for chronic panic disorders only)
Diazepam	(for chronic anxiety only)
Lorazepam	Ativan (for chronic anxiety only)

#### 28:24.92 Misc. Anxiolytics, Sedatives and Hypnotics

*Only listed products.*

Buspirone HCl	BuSpar
---------------	--------

#### 40:20 Caloric Agents

*Parenteral products only.*

Amino Acid Injections	
Fat Emulsions	
Total Parenteral Nutrition (TPN)	

#### 48:24 Mucolytic Agents

Acetylcysteine	Mucomyst, Mucosil
----------------	-------------------

#### 52:08\*\* Eye, Ear, Nose & Throat Anti-inflammatory Agents

*Inhalations for the treatment of bronchial asthma only.*

DELETE Funisolide (Nasalide) - *this is a spray not an inhalation.*

#### 52:24\*\* Mydriatics

Atropine Sulfate	
------------------	--

#### 56:16 Digestants

Pancreatin	Creon
Pancrelipase	Cotazym, Viokase, Pancrease

\*\* previously listed classification or product

# PHARMACY ALERT

## SUPPLEMENTARY LIST OF DRUGS COVERED UNDER MARYLAND (DHMH) PHARMACY ASSISTANCE PROVISIONS

EFFECTIVE OCTOBER 1, 1991

1. This list is a supplement and revision to the "List of Covered Drugs" published in Pharmacy Assistance Program Transmittal #1 and should be used in conjunction with that list.
2. All listed drugs are limited to a less than 34 days supply, except for the maintenance drugs marked with an asterisk. Up to a 100 days supply for these indicated drugs may be dispensed at one time. The prescriptions for all covered products are limited to an original and up to two refills, the total amount not to exceed a 100 days supply.  
In extenuating circumstances, permission may be obtained to dispense larger amounts, up to a 100 days supply of any covered drug by calling the Medical Assistance Preauthorization Desk at (301) 225-1755 or, from outside the local calling area only 1-800-492-6008 (toll free).
3. The brand names listed are an aid to identification. Other brands of the same drugs are also covered.
4. Commercially available products containing two or more active ingredients will be covered if one of the active ingredients is covered in the therapeutic category for which the product is to be used. Extemporaneously compounded products containing active ingredients which are not covered are not eligible for payment.
5. Newly marketed products in categories which are not limited to specifically listed items will be covered even though they are not listed.
6. While anti-infective products are covered for both acute and chronic care, all other products are covered only for the treatment of chronic conditions on a long term basis. Therefore, notation of the indication for use must be made on the prescription by the prescriber where limited indications for use are listed in the category. e.g. Opioid agonists are covered for use in chronic pain experienced by the terminally ill.
7. Over-the-counter drugs except those specified (aspirin and insulin) are not covered. Products evaluated as "less than effective" or otherwise restricted from payment by the Health Care Financing Administration (HCFA) are not covered.

THE FOLLOWING ADDITIONAL PRODUCTS ARE COVERED, EFFECTIVE OCTOBER 1, 1991:

GENERIC NAME	BRAND NAME	GENERIC NAME	BRAND NAME
<b>10:00 **Antineoplastic Agents</b>		<b>12:08.04** Antiparkinsonian Agents</b>	
	<i>Listed products only.</i>		
Chlorambucil	Leukeran	Pergolide	Permax
Cyclophosphamide	Cytoxan	Diphenhydramine HCl	Benadryl - for use as an antiparkinson agent only
Hydroxyurea	Hydrea		
Interferon Alpha**	Intron A, Roferon A	<b>12:08.08 Antimuscarines/Antispasmodics</b>	
Leuprolide Acetate	Lupron		<i>Listed products only.</i>
Megesterol Acetate	Megace		
Methotrexate	Folex	Dicyclomine	Bentyl - only for ulcerative colitis & irritable bowel syndrome
Tamoxifen Citrate	Nolvadex		

\* allowed in up to a 100 days supply

\*\* previously listed classification or product



---

## *President's Regional Conferences-Eastern & Southern Maryland*

---

The President's Regional Conference on the Eastern Shore is scheduled for November 14, 1991 at 4:30 pm at the Blue Crab restaurant in Cambridge, Maryland. The President's Regional Conference for southern Maryland is scheduled for March 12, 1991. Watch the Executive Director's Newsletter for more information about these conferences or contact Norbert Picha, Med Chi Deputy Executive Director, at 301-539-0872 or 1-800-492-1056.

---

## *Doctor/Lawyer/ Teacher Partnership*

---

Physicians in Baltimore City are needed to spend a few hours of their time to help prevent drug abuse in Maryland's children. As a physician volunteer in the Doctor/Lawyer/Teacher Partnership Against Drugs, you will visit a classroom of students in your area to discuss medical dangers of using drugs. Your lawyer partner will emphasize the legal consequences of drug use.

Training sessions will be held on Tuesday, January 14 and Wednesday, January 22, 1992 in the Med Chi Faculty Building for physicians interested in participating in this program. To volunteer or for more information, contact Betsy Newman, Public Relations Director, at 301-539-0872 or 1-800-492-1056.

---

## *Annual Meeting*

---

Med Chi's 1992 Annual Meeting will be held Thursday-Saturday, April 30-May 1, at the Omni International Hotel in Baltimore. AMA Trustee Thomas R. Reardon recently accepted Med Chi's invitation to be a featured speaker at the meeting. Watch the Executive Director's Newsletter for more meeting and program information.

---

## *Performing Arts Medicine Conference*

---

Med Chi's Committee on Medicine and the Performing Arts is sponsoring a conference on January 24-25 titled, "Performing Arts Medicine: Issues in Diagnosis and Management." For more information about this conference, which will be held in the Med Chi Faculty Building, contact Susan Harman at 301-539-0872 or 1-800-492-1056.

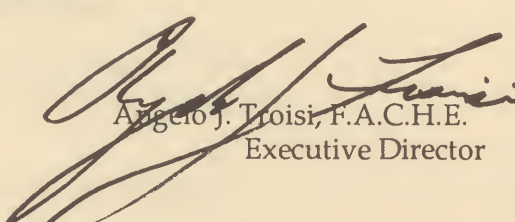
---

## *Pharmacy Assistance Program Alert*

---

Following this newsletter are revisions and additions in coverage under the Pharmacy Assistance Program (PAP) published in PAP Transmittal no. 1, effective June 1, 1991 as emergency provisions. These amendments limit coverage to anti-infective drugs and maintenance drugs for chronic diseases. The co-payment for all covered services is \$4.00. The Program has re-evaluated the list of therapeutic categories and added both additional categories and drug products in addressed categories.

In order to implement a revised list as soon as possible, the Pharmacy Assistance Program is again proposing, through the emergency process, amendments to Regulation .04 under COMAR 10.45.01 Eligibility and Regulations .01 and .03-.05 under COMAR 10.45.02 Services. These amendments which contain the revised list became effective October 1, 1991. The Department is proposing to adopt the amendments on a permanent basis, effective February 1, 1992.

  
Angelo J. Troisi, F.A.C.H.E.  
Executive Director

GENERIC NAME	BRAND NAME
<b>56:40** Miscellaneous GI Drugs</b>	
<i>Listed products only.</i>	

Metaclopramide**	Reglan
Misoprostal	Cytotec
Sucralfate	Carafate

**For Zollinger-Ellison Syndrome, Duodenal Ulcers or Gastroesophageal Reflux Disease:**

Cimetidine	Tagamet
Famotidine	Pepcid
Nizatidine	Axid
Ranitidine HCl	Zantac

**60:00 Gold Compounds**

Auranofin	Ridaura
Aurothioglucose	Solganal
Gold Sodium Thiomalate	Myochrysine

**68:04 Adrenals**

*Listed products only.*

**A. Inhalers for the treatment of bronchial asthma.**

Beclomethasone Dipropionate	Beclovent, Vanceril
Dexamethasone	Decadron
Flunisolide	AeroBid
Triamcinolone	Aristocort, Azmacort

**B. Oral and parenteral products for replacement therapy in adrenal insufficiency.**

Betamethasone	Celestone
Cortisone Acetate	Cortone
Dexamethasone	Decadron
Fludrocortisone Acetate	Florinef
Hydrocortisone	Cortef, Hydrocortone
Methylprednisolone	Medrol
Prednisolone	Prelone, Cortalone, Delta Cortef
Prednisone	Deltasone, Cortan, Meticortin
Triamcinolone	Aristocort, Kenacort

**68:08 Androgens**

*Listed products only.*

Danazol	Danocrine
Fluoxymestron	Halotestin
Methyltestosterone	Android-5, Oreton
Testosterone	Androlan

GENERIC NAME	BRAND NAME
<b>68:16** Estrogens</b>	
<i>Listed products only.</i>	

Chlorotrianisene	TACE
Conjugated Estrogens**	Premarin Only
Diethylstilbestrol	
Estradiol	Estraderm, Estrace (only sole ingredient products)
Estropipate	Ogen
Esterified Estrogens	Estratab, Menest
Quinistrol	Estrovis

**68:18 Gonadotropins**

Chorionic Gonadotropin	APL, Gonic
------------------------	------------

**68:32 Progestins**

Medroxyprogesterone Acetate	Provera, DepoProvera, Cycrin
Norethindrone	Norlutate, Aygestin, Norlutin (only sole ingredient products)

**84:06 Topical Anti-inflammatory Agents**

*Listed products only. Only for the treatment of psoriasis.*

Fluocinolone	Synalar, Lidex
Triamcinolone Acetonide	Kenolog, Aristocort

**84:36 Miscellaneous Skin and Mucous Membrane Agents**

*Listed products only.*

Fluorouracil	Fluorplex, Efudex
--------------	-------------------

**88:00\*\* Vitamins**

*Listed products only. Sole ingredient products only.*

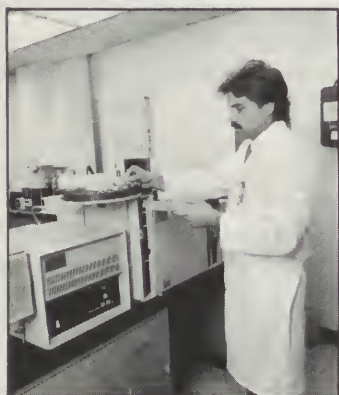
Calcifediol	Calderol
Calcitriol	Rocaltrol, Calcijex
Cyanocobalamin**	
Dihydratichysterol	Hytakerol, DHT
Ergocalciferol	Deltalin, Calciferol
Folic Acid**	
Niacin	

\* allowed in up to a 100 days supply

\*\* previously listed classification or product



# The Maryland Medical Laboratory Network



## **Quality and Accessibility...**

An industry leader, Maryland Medical Laboratory, Inc. is renowned for its high standards of performance and quality. The advanced technology of Maryland Medical Laboratory, Inc. is available around the clock and easily accessible via an extensive transportation and telecommunication network.

## **Caring with Excellence...**

Maryland Medical Laboratory, Inc. is people serving people. With years of combined laboratory experience, the Maryland Medical Laboratory, Inc. staff of caring Pathologists, medical technologists, and hundreds of administrative and support personnel stand ready to serve you and your patients.  
**INQUIRIES WELCOME**



## **MARYLAND MEDICAL LABORATORY, INC.**

1901 Sulphur Spring Road Baltimore, Maryland 21227  
(301)247-9100, Maryland 1(800)638-1731, U.S. 1(800)368-2576

## **THE MARK OF EXCELLENCE**

### Histoplasmosis is Endemic in the Potomac River Valley

The interesting article by Sauri et al on disseminated histoplasmosis in AIDS patients in Maryland (July 1991) is a good warning to watch for this complicating disease in areas of endemic histoplasmosis.<sup>1</sup> However, their implication that a travel history is helpful in arriving at a diagnosis fails to recognize that in addition to the Ohio, Mississippi, and St. Lawrence River valleys (which they specifically mention), the Potomac River valley is also an endemic area. Some of the initial studies on histoplasmosis were done in Loudon County, VA, and Washington, DC.<sup>2,3</sup> A series of maps of the distribution of histoplasmin sensitivity among Navy recruits shows that more than 50 percent of the lifetime residents of Washington, Frederick, and Harford Counties had been infected with histoplasmosis and that only in Garrett and Allegany Counties was infection uncommon.<sup>4</sup> Histoplasmin testing of high school students in Montgomery County showed that 71 percent of lifetime residents of the northwestern part of the county had been infected.<sup>5</sup> In Frederick County, 42 percent of sixth grade students reacted to histoplasmin<sup>6</sup> as did 55 percent of high school students who were lifetime residents of Washington County.<sup>7</sup>

In much of Maryland, and particularly along the middle Potomac River valley, it is not necessary to have traveled to be at high risk of having been infected by *Histoplasma capsulatum*.

#### References

1. Sauri MA, Julie NL, Juarbe HM et al. Disseminated histoplasmosis in AIDS patients in Maryland. *Md Med J* 1991; 40:573-6.
2. Emmons CW. Isolation of *Histoplasma capsulatum* from soil. *Public Health Rep* 1949; 64:892-6.
3. Emmons CW. Isolation of *Histoplasma capsulatum* from soil in Washington, DC. *Public Health Rep* 1961; 76:591-5.
4. Edwards LB, Acquaviva FA, Livesay VT et al. An atlas of sensitivity to tuberculin, PPD-B, and histoplasmin in the United States. *Am Rev Respir Dis* 1969; 99 (4, Part 2).
5. Edwards LB, Peeples WJ, Berger AG. Prevalence of sensitivity to tuberculin and histoplasmin among high school students in Montgomery County, Maryland. *Pediatrics* 1958; 21:389-96.
6. Chase HV, Campbell CC. Histoplasmin skin test survey of elementary school children in Frederick County, Maryland. *JAMA* 1962; 182:335-8.
7. Comstock GW, Vicens CN, Goodman NL et al. Differences in the distribution of sensitivity to histoplasmin and isolations of *Histoplasma capsulatum*. *Am J Epidemiol* 1968; 88:195-209.

GEORGE W. COMSTOCK MD, DrPH, FACE  
Hagerstown

### Potential for Missed Diagnosis in Rehabilitation Patients with a High-risk Lifestyle

There is little doubt among clinicians working in rehabilitation that a syndrome of premorbid pathology exists in which some patients have observed high-impulse, high-risk lifestyles that predispose them to injury. These patients frequently lack strong ties to such social institutions as marriage or work. Included in these high-risk lifestyles are the reckless use of automobiles and motorcycles, and a greater exposure to persons with guns and knives and a willingness to use them. Alcohol is known to be a risk factor related to both violence and motor vehicle injuries.<sup>1</sup>

This is evidenced in patients seen during their early years on the Montebello Traumatic Injury Rehabilitation Units. For example, an examination of spinal cord patients admitted from 1979 to 1984 shows that more than 50 percent of patients had a history of alcohol abuse; 37.3 percent of auto accident patients and 31 percent of gunshot wound patients had histories of alcohol and drug dependence.<sup>2</sup> On the Head Injury Unit in 1987, 29 percent of patients had a reported history of alcohol abuse alone, 13 percent drug abuse alone, and 24 percent a combined alcohol and drug abuse history. In all, approximately two-thirds had a reported history of substance abuse. Alcohol use has been implicated in increasing lengths of stay (LOS) in the acute care and rehabilitation facilities after head injury.<sup>3-4</sup>

Alcoholism is traditionally underreported and/or unrecognized in the health care setting. This may be attributed to staff inexperience, denial that a "nice" patient may have a dependency, or a reluctance to label an already stigmatized disabled person with still another label.<sup>5</sup> In addition, American society is very much in conflict about acceptable levels of alcohol and drug use. It is estimated that 6 percent of nurses and 10 to 13 percent of licensed physicians in the United States have alcohol or other drug dependencies. Thus, internal conflicts manifest themselves in either too liberal or too strict attitudes about substance abuse.<sup>6</sup>

Prevention of injury and tertiary physical problems related to alcohol abuse needs to be addressed by front-line physicians with referrals to and support of other professionals. As health planning becomes more cost conscious, and the association between physical disability and substance abuse is more clearly delineated, insurance companies are more willing to fund treatment of these conditions before they lead to permanent disability. Physicians and other health care professionals must learn and convey more information about these dangerous dependencies and their permanent and debilitating consequences.

#### References

1. Soderstrom CA, Carson SL. Update: Alcohol and other drug use among vehicular crash victims. *Md Med J* 1988; 37:541-5.



2. Koval J, Gaudet R, Becherman T, Einhorn I, Knudsen J, Flynn JP et al. The changing clinical programs at Montebello: A review of SCI patients 1979-1984. *Md Med J* 1986; 35:487.
3. Sparadeo FR, Gill D. Effects of prior alcohol use on head injury recovery. *J Head Trauma Rehabil* 1989; 4(1):75-82.
4. MacKenzie EJ, Morris JA, Edelstein SM. Effects of pre-existing disease on length of hospital stay in trauma patients. *J Trauma* 1989; 29:757-65.
5. Alcoholism as a secondary disability: The silent saboteur in rehabilitation. *Rehab Brief* 1982; V(6):1-4. National Institute of Handicapped Research, Office of Special Education and Rehab Services, Dept of Education, Washington, DC 20202.

6. Inlander CB, Levin LS, Weiner E. *Medicine on Trial*. New York: Pantheon Books. 1988.

*ANTOINETTE DEFAZIO PhD*

Director, Clinical Neuropsychology,  
MIEMSS and Montebello Rehabilitation Hospital

*JAMES P.G. FLYNN MD, MPH*

Director of MIEMSS

*MARK P. KELLY PhD*

Assistant Director, Head Injury Unit,  
Montebello Rehabilitation Hospital



## PHYSICIAN'S RECOGNITION AWARD

During July 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Alvaran, Simeon B.  
Baig, Mirza Hussain Ali  
Belaval, Gustavo S.  
Benack, Raymond Thomas  
Bennighof, David C.  
Berger, Jayson Milton  
Berger, Zidi B.  
Bowman, Philip Roger  
Campbell, Harold J.  
Cho, Jai Seong  
Colligan, Franklyn William  
Cooper, Lisa Angeline  
Da Costa, Maria  
Dooley, Thomas Edward  
Flores, Felix  
Friedland, Melissa Beth  
Friedlis, Mayo Frederick  
Friedman, Melvin Miles  
Gonzalez, Carol Marie  
Gordon, Roger Lee  
Hawver, Karl Derek  
Hofreuter, Virginia A.D.  
Hurwitz, Byron Stuart  
Hwang, Yong Hyen  
Jaffurs, William J.

Keunen, Hugo Ferdinand  
Keys, Marshall Phillip  
Khodabandelou, Mohammad  
Krasner, Alan Seth  
Lanzi, Joseph Gabriel  
Lee, Byoung-Kie  
Lin, Shu-Chai Willy  
Lindsay, Mary Elizabeth  
Magday, Joselito D.  
Mahdavi, Iradj  
McCarus, Steven Douglas  
Miller, Robert Alan  
Mokriski, Bettylou  
Naficy, Mohammad Ali  
Nanavati, Ashwin L.  
Nazemian, Jafar  
Newman, Christopher John  
Nicklas, Richard Austin  
O'Rourke, William Richard  
Padrino, Davide  
Palomo, Florecita Peralta  
Parrott, Estella C.  
Quattlebaum, James Tindal  
Quraishi, Hamid R.  
Raikar, Sudhir Vinayak

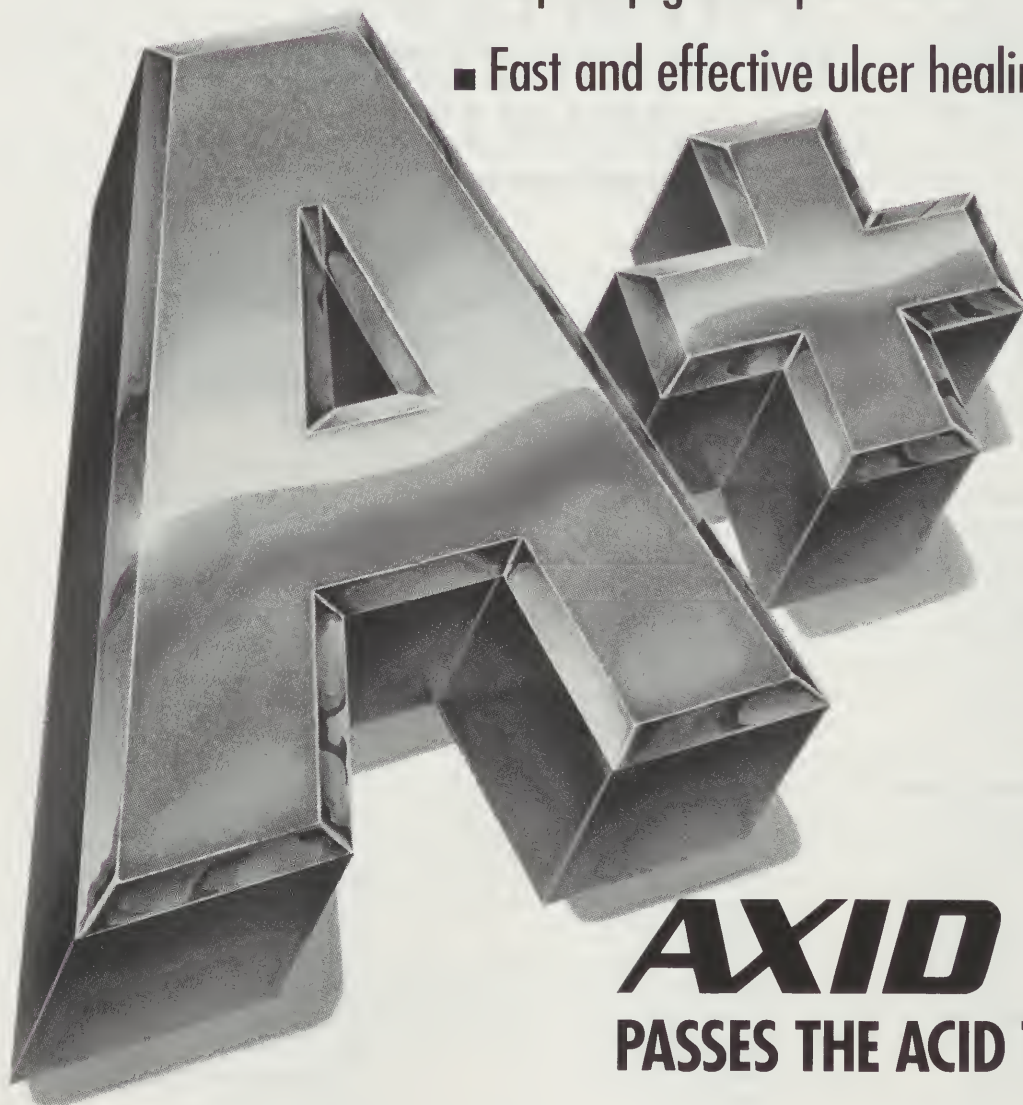
Reddy, Soma Narasimha  
Rupe, Carol Anne  
Sachdev, Sheelmohan S.  
Sagoskin, Arthur William  
Schimpff, Stephen C.  
Seinsheimer, Frank  
Shutta, John Andrew  
Southworth, Robert William  
Stephens, Theodore A.  
Thompson, Robert Campbell  
Townsend, Charles E.  
Ward, Robert Foster  
Waterbury, Marcia W.  
Weiner, Charles I.  
Weinstein, Frederick G.  
Whitley, Nancy C. O'Neil  
Wilhelm, Frederick Henry  
Wilkinson, Earl Vane  
Wohlgemuth, Joan  
Yancey, Kim Bruce  
Yusuf, Muhammad  
Zevallos, Anne  
Zevallos, Prospero

For excellent response in the treatment of  
duodenal ulcers...

**AXID**<sup>®</sup> nizatidine

has the right answers

- Rapid epigastric pain relief<sup>1,2\*</sup>
- Fast and effective ulcer healing<sup>2,3,4</sup>



**AXID**  
**PASSES THE ACID TEST**

\*Most patients experience pain relief with the first dose.  
See adjacent page for references and brief summary  
of prescribing information.



## AXID® (nizatidine capsules)

**Brief Summary.** Consult the package insert for complete prescribing information.  
**Indications and Usage:** 1. Active duodenal ulcer—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

2. Maintenance therapy—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than 1 year are not known.

**Contraindications:** Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H<sub>2</sub>-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H<sub>2</sub>-receptor antagonists.

**Precautions:** General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.  
3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

**Laboratory Tests:** False-positive tests for urobilinogen with Multistix® may occur during therapy.

**Drug Interactions:** No interactions have been observed with theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility:** A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C:** Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spinal bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers:** Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use:** Safety and effectiveness in children have not been established.

**Use in Elderly Patients:** Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic:** Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular:** In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS:** Rare cases of reversible mental confusion have been reported.

**Endocrine:** Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic:** Fetal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumental:** Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity:** As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other:** Hyperuricemia unassociated with gout or nephrolithiasis was reported.

**Overdosage:** Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

PV 2091 AMP  
(091190)

### References

1. Data on file, Lilly Research Laboratories.
2. *Scand J Gastroenterol* 1987;22(suppl 136):61-70.
3. *Scand J Gastroenterol* 1987;22(suppl 136):47-55.
4. *Am J Gastroenterol* 1989;84:769-774.

NZ-2943-B-149347

Additional information available to the profession on request.

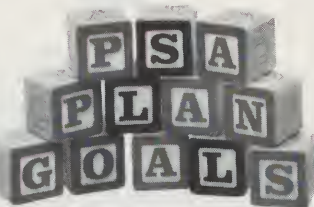


Eli Lilly and Company  
Indianapolis, Indiana  
46285

When it comes to building your financial future, you can't afford to settle for second best. That's why more and more of your colleagues are turning to PSA Financial Center for a full spectrum of financial, risk management, and investment counseling services designed expressly for the medical profession.

Our seven affiliate companies, both individually and as a team, have worked closely with over

# WE PUT IT ALL TOGETHER FOR YOU.



PSA Professional Liability, Inc.  
Malpractice Insurance

PSA Financial, Inc.  
Employee Benefits

PSA Financial Advisors, Inc.  
Financial Planning



PSA Financial Center  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

PSA Capital Management, Inc.  
Investment Management

PSA Pension Services, Inc.  
Design & Administration

PSA Insurance, Inc.  
Agents & Brokers

PSA Equities, Inc.  
Broker / Dealer

## PLANNING FOR OUR CLIENTS FINANCIAL FUTURE



TeamCare  
Infusion Management Services

TeamCare is a clinically specialized provider of infusion therapy services to long term care facilities, hospitals and patients at home.

From clinical office programs to managed care clients, we offer service intensive programs in pediatrics, oncology infectious diseases and nutritional support.

Baltimore, MD  
(301) 498-8928

Washington, DC  
(301) 989-0300

Tidewater, VA  
(804) 473-0304

Philadelphia, PA  
(215) 938-7390



## Which Box Would You Rather Deposit Your Insurance Reimbursements In?

If you process your claims through the mail, it takes an average of two months before your reimbursements make it to the bank.

And that can really put you in a box in terms of cash flow.

But not if you join the more than 1800 physicians who are now using HCS electronic claims systems. On the average, they receive payments in days, instead of months. Reason enough to consider using our custom designed systems.

What's more, our systems are labor savers. Stacks of claims that used to take weeks to process by mail can be sent through our claims

network in a matter of hours. Saving you enormously in administrative time. Not to mention postage.

And since HCS has the backing of a billion dollar health care organization, you can depend on us for long term support, service, and solutions as your office needs change.

Call Toll-Free 1-800-543-6711 for more information. Because in rain, snow, sleet or hail, we can deliver insurance reimbursements faster.



**Health Communication Services, Inc.**

*You'll Be Overwhelmed By Your  
Cash Flow, Not Your Overhead.*



---

# Multistate Investigation of Needle-handling by Health Care Workers

---

Ronald G. Kaczmarek MD, MPH, Roscoe M. Moore, Jr. DVM, DSc, PhD,  
John McCrohan MS, Ebenezer Israel MD, MPH,  
Carolyn Caquelin RN, BS, and Charles Reynolds MS

---

---

*A multistate investigation suggests that most of the Centers for Disease Control's (CDC's) recommendations regarding needle handling have been implemented, but that needle recapping by health care workers remains a significant problem.*

---

*Dr. Kaczmarek is a Medical Officer with the Center for Devices and Radiological Health (CDRH), Food and Drug Administration (FDA). Dr. Moore is Chief of the Epidemiology Branch, Office of Science and Technology, CDRH, FDA, and Chief Veterinary Officer of the US Public Health Service. Mr. McCrohan is Deputy Director, Division of Technical Development, Office of Training and Assistance, CDRH, FDA. Dr. Israel is Director of the Epidemiology and Disease Control Program of the Maryland Department of Health and Mental Hygiene. Ms. Caquelin is Chief of the Bureau of Disease Assessment for the Iowa Department of Public Health. Mr. Reynolds is a Project Coordinator at the Division of Health Care Quality, Massachusetts Department of Public Health. Reprints. Ronald G. Kaczmarek MD, MPH, HFZ-161, Center for Devices and Radiological Health, 12200 Wilkins Ave., Rockville, MD 20852.*

Needle-stick injuries have long been recognized as an important occupational hazard for health care workers (HCWs). Needles are ubiquitous devices in the health care setting. They are used for a myriad of purposes, including medication administration, phlebotomy, and arterial blood gas procedures.

Consequently, many HCWs are at risk for needle-stick injury. Twenty diseases have been reported to be transmitted by this route, including malaria, brucellosis, blastomycosis, and staphylococcal infections.<sup>1</sup>

Needle-stick transmission of blood-borne viruses is of particular concern. Both the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV) are known to be transmitted by this route. The risk of transmission by needle-stick is greater for HBV, probably because of the greater concentration of HBV in serum.<sup>2</sup> It has been estimated by the Centers for Disease Control (CDC) that the occupational transmission of HBV occurs in 12,000 HCWs each year.<sup>3</sup> Needle-sticks are one of the most significant causes of such transmission. Adverse sequelae of HBV infection include acute fulminant hepatitis, cirrhosis of the liver, and hepatocellular carcinoma.<sup>4</sup>

Although the risk of HIV transmission is relatively low following a needle-stick injury involving an HIV-infected patient (approximately one in 250 or 0.4 percent),<sup>2</sup> the risk of experiencing such an injury may be appreciable. A survey of New York City resident physicians reported that 36 percent of medical residents and 16 percent of pediatric residents

suffered needle-stick injuries when performing procedures on known HIV-infected patients. It is particularly worrisome that some respondents reported multiple needle-stick injuries involving known HIV-infected patients.<sup>5</sup>

Safe and effective curative therapy for HIV infection is not currently available. Similarly, an effective vaccine against HIV infection does not exist. The elimination of the occupational transmission of HIV by needle-stick injury must rest on prevention efforts.

The purpose of our multistate investigation was to observe and assess needle handling by HCWs performing routine procedures.

### Materials and Methods

The multistate investigation was conducted as a collaborative effort of the Center for Devices and Radiological Health (CDRH), the Food and Drug Administration, and the state health departments of Iowa, Maryland, and Massachusetts. A total of twenty-six health care facilities, consisting of twenty-two hospitals and four ambulatory care centers, participated in the investigation. The facilities were chosen subject to certain restrictions. Each state enlisted the participation of at least eight health care facilities. At least five of these facilities were required to be university-affiliated hospitals.

Concern for the occupational transmission of HIV may alter facilities' needle-handling policies and health care workers' compliance with such policies. The acquired immunodeficiency syndrome (AIDS) epidemic has not uniformly affected all health care facilities.<sup>6</sup> This has been caused, in part, by substantial interregional differences in the prevalence of HIV infection and AIDS. Because of intra-state regional differences, states were required to select at least one facility each from areas with population-adjusted cumulative incidences of AIDS substantially above and substantially below the statewide average.

Demographic information characterizing the participating facilities was collected. This information included bed size (for hospitals), percentage of Medicaid admissions, and annual number of admissions of known AIDS patients. The population-adjusted cumulative incidence of AIDS in the county in which each facility is located was noted and compared to its statewide counterpart.

To determine the facilities' compliance with the needle-handling recommendations made by the CDC, protocols regarding needle handling were reviewed and interviews were conducted with relevant personnel, such as infection control practitioners and environmental services directors.<sup>3</sup> CDC recommendations include not clipping, bending, or recapping needles, as well as disposing of needles in puncture-proof containers located near the site of use (e.g., in patients' rooms).

Actual needle handling by HCWs was observed. The vast majority of the 358 observations of the handling of con-

taminated needles by HCWs during routine procedures, such as phlebotomy and arterial blood gas drawing, were made directly. In one state, direct observation was supplemented by a limited number of observations of discarded needles. Observations were made in a range of locations, including emergency rooms, outpatient departments, inpatient nursing units, and radiology suites. Personnel observed included nurses, physicians, respiratory technicians, and phlebotomists.

### Results

A broad demographic mix of hospitals participated in the multistate investigation. Hospital size, characterized by the number of licensed beds, extended across a wide spectrum. Eleven hospitals had more than 300 licensed beds, eight had 100 to 300 licensed beds, and three had fewer than 100 beds. The relative proportion of privately insured and Medicaid patients treated by the respective hospitals also varied widely. At three hospitals, more than 20 percent of the discharged patients were Medicaid recipients. The proportion of Medicaid patients discharged at seven of the hospitals ranged from 10 to 20 percent. Twelve hospitals provided care to predominantly privately insured patients; less than 10 percent of discharged patients were Medicaid recipients. All four ambulatory care centers had patient populations comprised of less than 10 percent Medicaid recipients.

The number of AIDS patients treated at each facility varied considerably. Three hospitals provided care to substantial numbers of AIDS patients; each year more than fifty AIDS patients were admitted at each facility. Five hospitals had twenty-one to fifty annual admissions of AIDS patients. Thirteen hospitals had 20 or fewer such admissions per year. All four ambulatory care centers and one hospital never provided care to a known AIDS patient.

Based on protocol reviews and interviews with relevant personnel, the fundamental CDC recommendations regarding needle handling had been incorporated into the policies of all of the facilities. Policies prohibited needle bending, clipping, or recapping, and all facilities used puncture-proof needle disposal containers.

A total of 358 observations were made of needle handling by HCWs and/or of discarded needles (Table 1). Needle bending was not observed. The prevalence of needle clipping or other forms of needle breakage was 0.6 percent. The prevalence of needle recapping was 21.5 percent. Needle recapping was observed in all investigated locations, includ-

Table 1. Observed Non-compliance with CDC Needle-handling Recommendations

Observation	Prevalence (%)
Needle bending	0
Needle clipping/breakage	0.6
Needle recapping	21.5
Failure to dispose used needle in puncture proof container	0.9



ing emergency rooms, radiology suites, outpatient departments, and inpatient nursing units.

Two-handed and one-handed needle recapping were observed (Table 2). Two-handed recapping occurs with the needle cap held by the HCW. One-handed recapping occurs without the HCW holding the needle cap during the recapping process; it is accomplished by scooping the needle into the cap that is untethered or held by a device, not the health care worker's hand. The prevalence of two-handed recapping was 17.8 percent, and the prevalence of one-handed recapping was 3.6 percent.

Puncture-proof needle disposal containers were observed at all of the participating facilities. At twenty-four (92 percent) facilities, these containers were always present in patients' rooms and examination areas. At one (3.8 percent) facility, the containers were not available in all of the observed locations. Another facility placed its needle disposal containers at nursing stations, not in patients' rooms. A total of 99.1 percent of the needles used by HCWs were disposed of in puncture-proof containers.

### Discussion

The incorporation of CDC recommendations into the needle-handling policies of all participating facilities strongly suggests that these recommendations have been widely received and implemented by health care facilities' infection control practitioners. Several factors may have contributed to the high degree of compliance with CDC recommendations. First, the CDC recommendations were clearly written and well-publicized. Second, medicolegal concerns may have played a role. Lawsuits have been filed against hospitals by HCWs who suffered needle-stick injuries.<sup>7</sup> Concerns regarding legal liabilities, particularly from needle-stick transmission of HIV, may have expedited the adoption of CDC guidelines. Third, the Department of Labor has promoted the adoption of the CDC recommendations. A 1987 Department of Labor/Department of Health and Human Services Joint Advisory Notice advised employers to develop "specific and detailed procedures to be observed with sharp objects, e.g. needles."<sup>8</sup> Furthermore, employers must provide readily accessible puncture-proof containers for needle disposal.

Several results from the observation of needle handling by HCWs are encouraging. Less than 1 percent prevalence of needle bending or clipping suggests these archaic practices may have been extinguished. The education of HCWs regarding appropriate needle handling may be netting significant dividends in this area. The prompt disposal of used needles in puncture-proof containers more than 99 percent of the time is particularly encouraging. The rapid disposal of

needles in such containers can help protect housekeeping staff from needle-stick injury. Past studies have demonstrated that housekeeping staff are at risk for needle-stick injuries from needles left in bedsheets, in wastebaskets, and on tables. One study reported that 17.4 percent of all needle-stick injuries occurred among housekeeping staff.<sup>9</sup> These data also suggest widespread compliance with recommendations to locate needle-disposal containers at the sites of use (e.g., patients' rooms). The location of needle-disposal containers in this fashion decreases the potential for needle-stick injury during the process of transporting the needle to the disposal container.

The substantial observed prevalence and widespread nature of needle recapping indicates it remains a serious problem. Several factors may explain why the observed high rate of compliance with other CDC recommendations did not extend to needle recapping. First, negative learning may help explain the persistence of needle recapping. Many HCWs, including one of the authors (RGK), were actively taught during training to recap needles. Second, safety concerns may promote recapping. Jagger et al reported that, based on her interviews, many HCWs recap needles because they are afraid they may injure other HCWs with an uncapped needle.<sup>1</sup> Third, certain medical procedures, such as an arterial blood gas, require manual needle removal that can be accomplished by recapping.

Because arterial blood gas procedures are performed frequently on AIDS patients, needle recapping during this procedure is of particular importance. The leading cause of death in AIDS patients is *Pneumocystis carinii* pneumonia.<sup>10</sup> The management of *Pneumocystis carinii* and other pneumonias requires frequent arterial blood gas determinations. It is also important to note that many AIDS patients undergo multiple hospitalizations for *Pneumocystis carinii* infections. Needle recapping during arterial blood gas procedures with conventional equipment may often create the potential for occupational needle-stick transmission of HIV.

Two approaches -- education and engineering changes -- should be followed to reduce needle-stick injuries. Our data suggest that HCWs require further education in order to cease needle recapping. Reminding recalcitrant HCWs that needle disposal containers have been moved from nursing stations into patients' rooms may make them more comfortable in handling uncapped needles. Potential engineering changes encompass a broad spectrum of possibilities. It should not be overlooked that, holding all other factors constant, substituting procedures not requiring needles for procedures requiring needles will reduce the incidence of needle-stick injuries. A number of devices designed to reduce the frequency of needle-stick injuries have been developed.<sup>11</sup> These safety features include retracting the needle into the barrel or sliding a protective safety sheath over the needle after use. The AIDS epidemic may provide the impetus for further development and widespread utilization of safer needles. Prior to the onset of the AIDS epidemic, the case was compelling for measures to reduce the frequency of needle-stick injuries. With the

Table 2. Needle Recapping

Type of Recapping	Prevalence (%)
One-handed	3.6
Two-handed	17.8
Total	21.5

dramatic increase in the prevalence of HIV infection and its increasing geographic diffusion, the case in favor of measures to reduce the frequency of needle-stick injury is overwhelming. This study's data suggest that progress in promoting appropriate needle handling has been made, but that more work remains to be done.

### References

1. Jagger J, Hunt EH, Brand-Elnaggar J, Pearson RD. Rates of needle-stick injury caused by various devices in a university hospital. *N Engl J Med* 1988; 319:284-8.
2. Marcus R. Surveillance of health care workers exposed to blood from patients infected with the human immunodeficiency virus. *N Engl J Med* 1988; 319:1118-23.
3. Centers for Disease Control. Guidelines for prevention of transmission of human immunodeficiency virus and hepatitis B virus to health care and public safety workers. *MMWR* 1989; 38(No. S-6):1-37.
4. Goodlad J. Understanding hepatitis B. *Nursing Times* 1989; 85:69-71.
5. Link RN, Feingold, AR, Charap MH, Freeman K, Shelov S. Concerns of medical and pediatric house officers about acquiring AIDS from their patients. *Am J Public Health* 1988; 78:455-9.
6. Wachter RM. The impact of the acquired immunodeficiency syndrome on medical residency training. *N Engl J Med* 1986; 314:177-80.
7. Aoun H. When a house officer gets AIDS. *N Engl J Med* 1989; 321:693-6.
8. Dept. of Labor/Dept. of HHS Joint Advisory Notice. Protection against occupational exposure to hepatitis B virus (HBV) and human immunodeficiency virus (HIV). October 19, 1987;1-14.
9. McCormick RD, Maki DG. Epidemiology of needle-stick injuries in hospital personnel. *Am J Med* 1981; 70:928-32.
10. Scutchfield FD, Berenson AS. AIDS update. *Postgrad Med* 1989; 85:289-94,301-4.
11. Jagger J, Pearson RD, Brand JJ. Avoiding the hazards of sharp objects. *Lancet* 1986; 1:274. ■

# If Time Is Money, LifeCard Is Worth Millions.

LifeCard electronic claims processing verifies receipt of claims within 24 hours, reduces paperwork, accelerates payments, edits claims before they leave your office, and saves you money every time you file a claim.

Whether you are already using a computer or just getting started, LifeCard can

link your office to BCBS of Maryland, BCBS of the National Capital Area, Medicare B, Maryland Medicaid, and more than 21 major commercial insurance carriers.

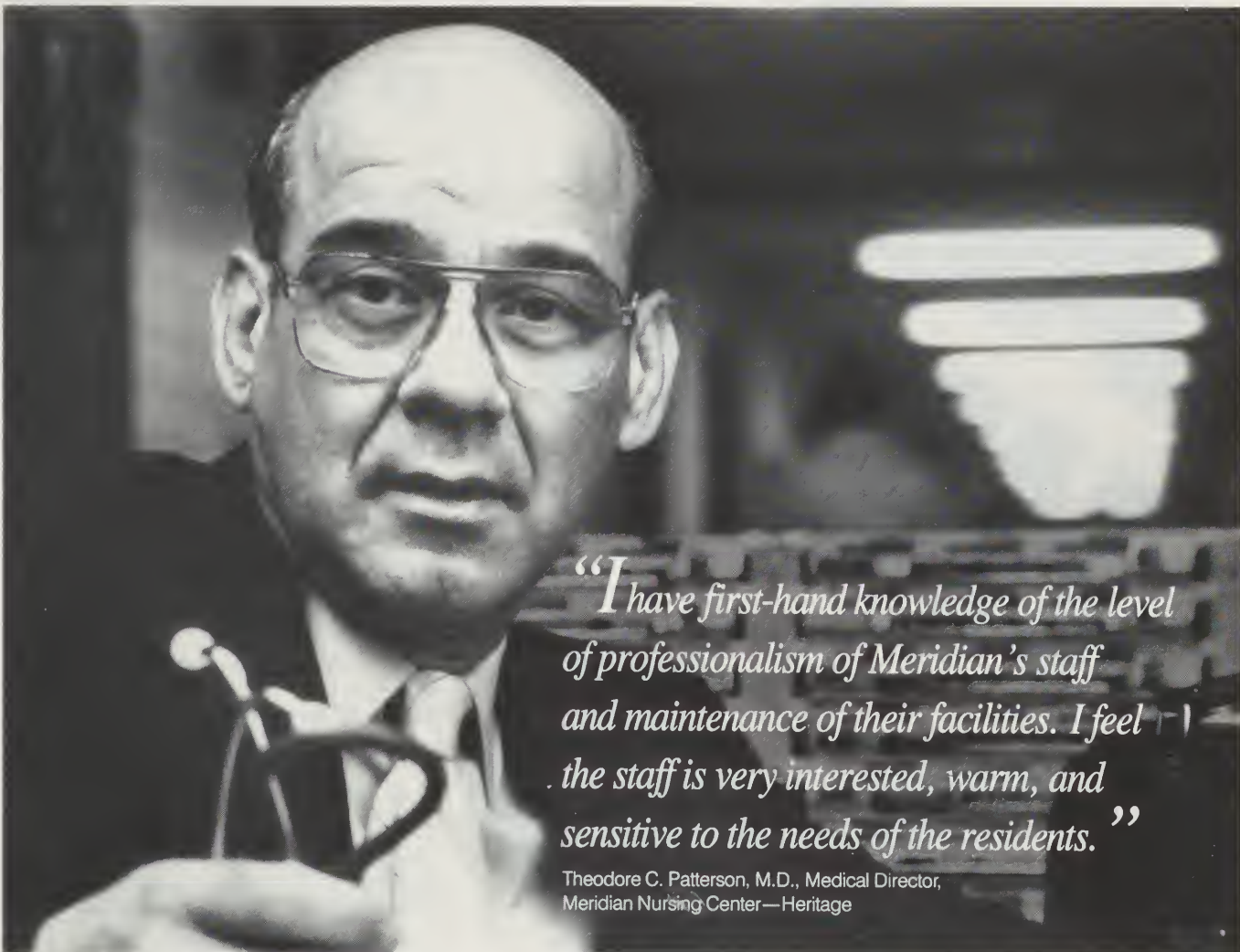
Join the thousands of Maryland health care professionals who are saving time and money with paperless claims handling.



**Blue Cross  
Blue Shield**  
of Maryland

**Call your LifeCard representative today  
at 301-998-4490 or toll free at 1-800-227-3467.**





*"I have first-hand knowledge of the level of professionalism of Meridian's staff and maintenance of their facilities. I feel the staff is very interested, warm, and sensitive to the needs of the residents."*

Theodore C. Patterson, M.D., Medical Director,  
Meridian Nursing Center—Heritage

#### **Partners in Healthcare**

As a private practitioner, you want assurances that a nursing home can—and will—provide quality medical care for your patients. And you want assurances that such care will be provided in an atmosphere of cooperation and respect.

Meridian Healthcare, with its 18 Maryland homes, works with the medical community to provide just such assurances. Including IV care and other sub-acute services available at our Multi-Medical facility. Meridian continues its commitment to develop models of care for the Alzheimer's patient in consultation with The Johns Hopkins Medical Institutions. Or specialized in-house rehabilitation programs, including occupational and physical therapy, and speech/language pathology services available at all our nursing centers. And special services like short-term or respite care, our own

pharmacy, pet therapy, art classes, gourmet night, outings, and a host of programs to maximize independence. Then there's our full-time activity directors, social workers, and dietitians—all of whom are specialists in geriatric care.

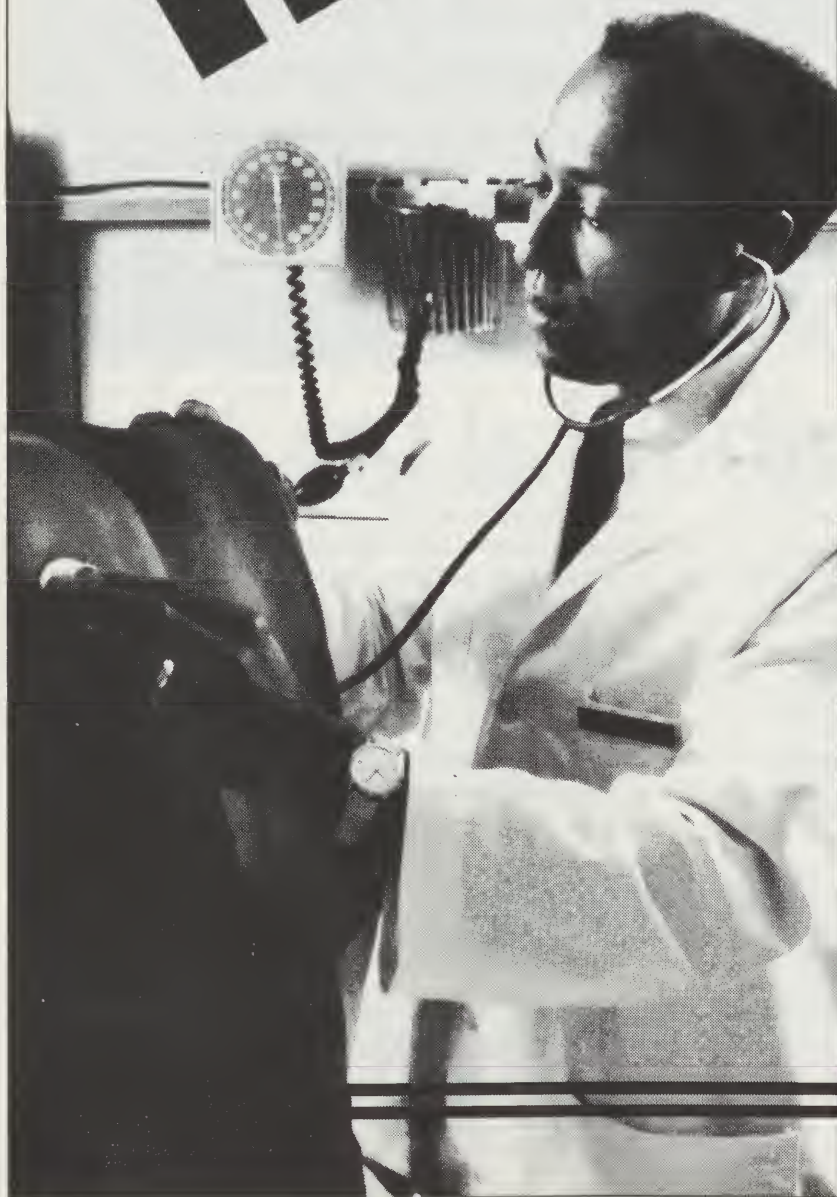
Each one of our 18 Meridian Nursing Centers is dedicated to supporting you and your treatment regime, making it as easy as possible for you to aid your patients and their families. Experience the Meridian difference today.

Call 296-1000 for the facilities in your practice area.

Meridian Nursing Centers—  
The Professional Choice.



# AIM HIGH



## **SPECIALIZE IN AIR FORCE MEDICINE.**

ER Physicians. Radiologists. OB/GYNs and other specialists!

Today's Air Force gives you the freedom to specialize without the financial overhead of running a private practice. Talk to an Air Force medical program manager about the tremendous benefits of becoming an Air Force medical officer:

- No office overhead
- Dedicated, professional staff
- Quality lifestyle and benefits
- 30 days vacation with pay each year

Examine your future in the Air Force. Learn if you qualify. Call

**USAF HEALTH  
PROFESSIONS**

**(301) 981-7897  
COLLECT**





---

# Pregnancy and Addiction: Outcomes and Interventions

---

Mary E. McCaul PhD, Dace S. Svikis PhD  
and Terry Feng MD

---

*From The Johns Hopkins University School of Medicine where Dr. McCaul is Associate Professor and Dr. Svikis is Assistant Professor, Department of Psychiatry and Behavioral Sciences, and Dr. Feng is Assistant Professor, Department of Gynecology and Obstetrics.*

---

*Cocaine use by pregnant women has increased dramatically in recent years, resulting in well-documented consequences for mothers and offspring. However, even a once weekly peer-oriented intervention can have a positive impact on pregnancy outcome for drug-using women.*

---

It has been estimated that 11 to 20 percent of pregnant women in the United States have a problematic pattern of alcohol and/or illicit drug use.<sup>1-5</sup> Cocaine use accounts for up to half of these cases, with prevalence ranging from 3 to 17 percent.<sup>2,4,6</sup> Other drugs often abused by pregnant women include alcohol and marijuana.<sup>7-9</sup> One of the most widely used and frequently overlooked drugs is nicotine, with a prevalence of 28 to 54 percent.<sup>8-12</sup> It is important to point out that polydrug use/abuse currently seems to be the rule rather than the exception,<sup>3,4,13,14</sup> particularly when nicotine is included in the abuse profile. These estimates of drug use by pregnant women most likely represent a gross underestimation of actual use due to social and psychological pressures to deny substance use during pregnancy and the illicit nature of much of this drug use.<sup>15</sup>

In some studies, drug use estimates in urban obstetrical clinic populations have been reported as even higher than general population estimates.<sup>8</sup> However, a recent study by Chasnoff and colleagues<sup>7</sup> demonstrated that patients in both public and private settings are at risk for drug use and should be interviewed concerning their alcohol and other drug use. Specifically, urine toxicology screens were obtained on all women enrolled in prenatal care at five county health clinics and twelve private obstetric (OB) practices in Florida during the first six months of 1989. Pregnant women seen at public clinics and those examined in private practices tested positive for alcohol or illicit drugs at approximately the same rate, that is, 16.3 percent positive in public clinics and 13.1 percent in private clinics. Similarly, black and white pregnant women tested positive at comparable rates, with approximately 15 percent of both groups testing positive for alcohol or any illicit drug. There was an interesting difference in the drug most commonly used by black versus white women. Cocaine use was evident in 7.5 percent of black OB patients but in only 1.8 percent of white patients; whereas, marijuana use was evident in 14.4 percent of white patients as compared with 6 percent of black patients. As is now true in two other states (Minnesota and Illinois), Florida requires that women known to have used alcohol or illicit

drugs during pregnancy be reported to the health authorities. Despite the comparability in drug use prevalence in white and black OB patients, the Chasnoff et al study found marked differences in the frequency of physician reports of drug use between the two groups. Review of public health records indicated that black women were being reported at approximately ten times the rate of white women. These data suggest that drug use is common in pregnant women regardless of race and socioeconomic status; however, it appears to be differentially detected and reported based on the sociodemographic characteristics of the OB patient.

The high prevalence of drug use, with its frequent and sometimes severe complications to both mother and fetus, emphasizes the importance of identification of and intervention with pregnant drug abusers.

### **Obstetrical and Fetal/Neonatal Complications Associated with Drug Use**

The incidence of obstetrical complications in drug-using women is elevated compared with control populations of non-drug-using women. Complications specifically associated with cocaine use include reduced maternal weight gain, precipitous delivery, placental abruption (usually occurring shortly after drug use), preterm labor and delivery, spontaneous abortion, and meconium-staining.<sup>4,6,9,16-18</sup> Preterm labor and delivery and problems with spontaneous abortion have been well-documented in heroin addicts<sup>18-20</sup> and alcoholics.<sup>21-23</sup>

Provision of appropriate medical services for these OB complications is made more difficult by the failure of many of these women to seek adequate prenatal care.<sup>18</sup> For example, in an earlier study by Connaughton and colleagues,<sup>24</sup> pregnant women using illicit drugs were found to average only one prenatal visit, compared with nine visits in non-drug-using patients. More recently, Zuckerman and colleagues<sup>9</sup> examined prenatal clinic attendance of both cocaine- and marijuana-using women at a large, inner-city hospital. While women with no drug use averaged 9.2 prenatal clinic visits, women who used marijuana or who used cocaine had clinic attendance rates of 7.9 and 6.5, respectively.

Maternal drug use negatively impacts not only the mother's health status but the health of the fetus/neonate. The most obvious neonatal complication is drug withdrawal. Frequently observed withdrawal symptoms in neonates exposed to opiate drugs include central nervous system (CNS) hyperirritability, loose stools and other gastrointestinal dysfunctions, nasal stuffiness, yawning, sneezing, increased lacrimation, and fever.<sup>18,25-28</sup> Symptoms associated with cocaine withdrawal in neonates are less pronounced than those associated with opiate withdrawal. Cocaine withdrawal symptoms may include tremors, irritability, high-pitched and excessive crying, vigorous sucking, and hyperactivity.<sup>6,17,29-31</sup>

In addition to the risk of neonatal drug withdrawal, there is a high frequency of other fetal/neonatal complications

associated with maternal drug use. For example, Connaughton and colleagues<sup>24</sup> reported the overall morbidity incidence for neonates of drug-using mothers to be over twice that of controls, with the overall mortality rate being three times higher in drug-exposed infants. Similarly, Finnegan<sup>18</sup> reported a greater than two-fold increase in the mortality rate for infants born to heroin- and methadone-dependent women (5 percent) as compared with a control population (2 percent). This increased morbidity has been associated with a higher percentage of the neonates of drug-using mothers achieving Apgar scores less than 7.<sup>3,32,33</sup> In the fetuses of almost 50 percent of pregnant cocaine addicts,<sup>34</sup> suboptimal growth has been reported, with an increased incidence of intrauterine growth retardation and reduced weight, length, and head circumference at birth.<sup>4,9,10,35</sup> In general, the percentage of neonates with birthweights below 2,500 grams shows a two- to three-fold elevation in drug-exposed neonates as compared with control neonates.<sup>3,24</sup> Finally, Chasnoff and colleagues<sup>16</sup> reported a significantly increased incidence of sudden infant death syndrome (SIDS) in infants exposed to cocaine as compared with population base rates, although several more recent studies have failed to confirm these findings.<sup>36,37</sup> Similarly, a 2 to 3 percent incidence of SIDS has been observed in infants born to narcotic-using mothers.<sup>14</sup> It is important to note that an increased incidence of malformations, particularly genitourinary, cardiac, and CNS malformations, has been reported in infants delivered to cocaine-using mothers.<sup>4,9,14,16</sup> This variety of complications associated with fetal drug exposure is reflected in an almost four-fold increase in the length of hospitalization for drug-exposed neonates. Specifically, drug-exposed neonates have been reported to spend an average of twenty-two days in the hospital, compared with six days for the general population.<sup>24</sup>

### **Other Medical and Psychosocial Problems Associated with Drug Use during Pregnancy**

In addition to the direct, toxic effects of drug exposure on mother and child, substance abuse is associated with a variety of other problems that may have an adverse impact on pregnancy outcomes. There is an increased risk for intrauterine growth retardation which may be a result of nutritional deficits secondary to decreased intake or impaired digestion, absorption, or utilization of nutrients.<sup>10</sup> Also, the generally disorganized lifestyle of the substance abuser may contribute to inadequate prenatal care<sup>3</sup> and poor parenting skills.<sup>38</sup> The economic burden of supporting illicit drug use may lead to other illegal activities such as theft or prostitution which further decrease the likelihood of the user seeking health care while making her more susceptible to problems such as sexually transmitted diseases.<sup>9,39</sup> Use of unsterile or contaminated needles increases the risk for cellulitis, hepatitis,<sup>24</sup> and endocarditis.<sup>39</sup> Such infections in the mother can result in intrauterine or perinatal infection of the fetus as well.

Of even greater concern is the increasing prevalence of



human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) in women of childbearing age. Eighty percent of women with AIDS in the US are between eighteen and forty years of age and thus have a reasonable likelihood of becoming pregnant prior to death.<sup>40</sup> As a result, there now is increasing vertical transmission of HIV from mother to neonate.<sup>41</sup> Among children with AIDS, the majority were born to mothers whose risk factor for HIV infection was intravenous (IV) drug use or sexual contact with an IV drug user.<sup>40-43</sup> It is projected that perinatal exposure will become the exclusive route by which children acquire HIV infection and the major source of this infection will be intravenous drug use by the mother or her sexual partner. Although only 20 to 50 percent of the children born to HIV-infected women actually become infected,<sup>41,43,44</sup> prognosis in children is dismal. Failure to thrive, loss of developmental milestones and intellectual abilities, and recurrent serious infections are hallmarks of this disease in children.<sup>40,42</sup> Even for children who escape infection, the developmental impact of living in a family disrupted by substance abuse and parental illness or death may have serious long-term consequences.<sup>40</sup>

#### **Physician Roles in Identification of and Intervention with Pregnant Drug Users**

The range and severity of obstetrical and fetal problems associated with drug use highlight the importance of physician identification and management of drug use during pregnancy.<sup>45</sup> Further, the recent finding of similar rates of positive urine drug toxicologies in private and public clinics emphasize the importance of all physicians adopting a more active role in this process. Screening for alcohol and drug use and associated problems should become a routine part of obstetrical histories and examinations. Brief yet effective screening instruments are available. An easily implemented interview is the 4-item TACE: (1) How many drinks does it take to make you feel high (Tolerance)? (2) Have people Annoyed you by criticizing your drinking? (3) Have you felt you ought to Cut down on your drinking? (4) Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (Eye opener)?<sup>46</sup> The Short Michigan Alcohol Screening Test (SMAST)<sup>47</sup> offers a paper-and-pencil self-administration option. Both the TACE and the SMAST can be adapted for identifying drug-related problems in addition to their more traditional use for alcoholism screening. In addition, toxicology screens can be useful for detecting recent drug use.<sup>7,9</sup>

When an alcohol or drug problem is identified, the physician should take an active role in conducting an intervention with the patient. This intervention should emphasize the positive gains for both mother and child that can result from cessation of drug use at any time during the pregnancy, and should introduce the patient to the benefits of substance abuse treatment involvement. A referral to treatment may be

appropriate, including community support groups, outpatient treatment programs, methadone maintenance for those women who are opiate dependent, and inpatient, residential, or detoxification services for those women who are in danger of experiencing withdrawal complications or who have not been able to stop their drug use on an outpatient basis.

Finally, it is critical that there be continued follow-up with the pregnant woman concerning her drug use. For example, drug use should be assessed at each prenatal and postpartum visit. A toxicology screen should be completed at the time of delivery to help guide care of the neonate and the mother. A linkage with social services may be important, especially for those women who have been unable to discontinue their drug use during their pregnancy.

#### **Treatment Strategies for Pregnant Drug-using Women**

To date, specialized services for pregnant substance users have been developed primarily in conjunction with fetal alcohol syndrome demonstration projects<sup>48,49</sup> and methadone maintenance programs.<sup>24,50,51</sup> Adopting a public health/education model, Little and colleagues<sup>48</sup> developed a three-component program for pregnant women with problematic alcohol use. The components include public education and professional training, assessment and counseling for individual women with alcohol-related problems, and program evaluation. In the Women's Clinic at Boston City Hospital, Rosett and colleagues<sup>52</sup> integrated therapy aimed at alcohol cessation and prenatal care for pregnant women who continued to drink heavily during their pregnancies. Patients participated in half-hour individual therapy sessions with the project psychiatrist and/or counselor; these sessions were scheduled in conjunction with the patients' regular prenatal clinic appointments (ranging from one to four times monthly). Sessions focused on decreasing alcohol and other drug use, allaying fears associated with delivery, strengthening family relationships, coping with real life problems, and addressing other issues important to the woman. Such programs have been very encouraging, with improved obstetrical and fetal/neonatal outcomes even when drug use was reduced but not eliminated.<sup>52,53</sup>

Recently, Finnegan<sup>18</sup> developed guidelines for the critical treatment components for managing drug-dependent women and their children. She has suggested that comprehensive programs include intensive prenatal management for high-risk pregnancies, psychosocial counseling, prenatal/parenting education classes, psychiatric therapy when necessary, and methadone maintenance when appropriate. In addition, the neonate should be carefully assessed and monitored for potential complications resulting from alcohol or drug withdrawal as well as other perinatal stressors associated with maternal addiction. Outcome information on these comprehensive treatment models for women are limited, and almost no data are available on overall drug use and



psychosocial functioning of the mother during and following program participation (e.g., most of the evaluation efforts have focused on obstetrical and neonatal outcome). The advantage of providing specialized services for women has been demonstrated in a recent study comparing such services with more traditional mixed-gender treatment programming.<sup>54</sup> This study found reduced alcohol consumption and improved social adjustment at two-year post-treatment follow-up in women receiving specialized female services as compared with control subjects. Even though these findings were not specific to pregnant women, they suggest the potential benefits of providing services uniquely tailored to the needs of women.

### A Comparison of Cocaine-using versus Other Drug-using Women

In the last several years, there has been increasing interest in and attention to the alcohol and drug use behaviors of obstetric patients in The Johns Hopkins Hospital Obstetrical Clinic. Screening for drug use has become a routine part of clinic intake and those women who are identified as alcohol or drug users are referred for a more in-depth assessment with a substance abuse specialist at the hospital. Based on patient availability, this assessment interview consists of either the Addiction Severity Index (ASI)<sup>55</sup> and the Family Alcohol and Drug Survey based on Family History - Research Diagnostic Criteria,<sup>56</sup> or the CAGE screening questions<sup>57</sup> and the SMAST.<sup>47</sup>

To examine the characteristics of these substance-abusing pregnant women, we conducted a record review of OB patients referred to the substance abuse specialist during a one-year period starting in April 1989; of particular interest was a comparison of patients referred as a result of cocaine use with those referred for use of other drugs. Of the women referred to the specialist, eighty-four or 64 percent were referred for cocaine use and forty-seven or 36 percent were referred for use of other drugs, including heroin (N=23), alcohol (N=19), and marijuana (N=5). While we are continuing our data collection on this project, we have summarized data from the 131 cases collected to date (Table).

Cocaine- and other drug-abusing pregnant women in our program are comparable in demographic characteristics; these women are generally in their mid-twenties and are predominantly black and single, with less than a high school education. Women in both groups reported an average of 1.5 children, excluding the current pregnancy.

For women who used cocaine as compared with other drug users, there was a significant elevation in the ASI severity ratings assigned by the substance abuse specialist for several areas of psychosocial functioning. Specifically, cocaine-using women were rated as being in greater need of medical, drug, and psychiatric treatment, as well as employment counseling; there also was a trend for a greater need for legal counseling. Despite these differences in treatment needs,

cocaine-using women were no more likely to have been previously enrolled in substance abuse treatment than other drug-using women. Over 80 percent of the women in both groups reported regular cigarette smoking during their current pregnancy; these high rates are in sharp contrast with the much lower rates of cigarette smoking (18 percent) observed in a demographically comparable sample of pregnant women at The Johns Hopkins Hospital. These dramatic differences suggest that current cigarette smoking may be a useful marker for identifying women who use drugs during their pregnancies. The prevalence of intravenous drug use was approximately three times higher in the cocaine group (34 percent) as compared with the other drug use group (12 percent) ( $p < .007$ ). Rates of HIV-seropositivity were also significantly higher in cocaine-using women (12 percent) than in other drug-using women (0 percent) ( $p < .04$ ). Although no differences were observed between the two groups in the prevalence of sexually transmitted diseases (21.6 percent), these rates showed an approximately nine-fold elevation relative to population base rates for this geographic area.<sup>58</sup>

There were no differences across the two groups in the proportion of women who obtained prenatal care during the current pregnancy; approximately 75 percent of the women in both groups registered for obstetrical care before the twenty-eighth week of pregnancy. In both drug-use groups, approximately 40 percent of the women provided positive drug urinalysis screens at labor and delivery. There were two interesting obstetrical outcomes that did not achieve statistical significance (due, in part, to the relatively small sample size examined to date), but are in line with above referenced reports of cocaine effects during pregnancy. First, infants born to cocaine-using women tended to have a lower mean birthweight than infants born to other drug-using women.

**Table. Demographic, Substance Abuse, Psychosocial and Obstetrical Characteristics of Cocaine and Other Drug-abusing Pregnant Patients.**

	Cocaine	Other Drugs	p
Age (yrs)	25.2	25.5	ns
Education (yrs of school)	10.7	11.2	.07
Race (% black)	88	94	ns
Marital status (% single)	82	83	ns
ASI Interviewer Severity Ratings:*			
Drug use	5.1	3.6	.0005
Alcohol use	2.0	2.0	ns
Medical status	4.0	2.3	.005
Employment status	3.3	1.9	.01
Legal status	0.6	0.1	.07
Psychiatric status	1.2	0.3	.05
Family status	2.4	2.2	ns
Obstetrical Outcome:			
Birthweight (gms)	2,800	2,960	.12
Abruptio placenta (%)	29	13	.13

\*ASI Interviewer Severity Ratings range from 0-9, with 0 being no treatment necessary and 9 being extreme need for treatment.



Also, there tended to be a higher incidence of abruption for cocaine-using as compared with other drug-using women.

### Effects of a Prenatal Support Group on Pregnancy Outcome

Because of the high prevalence of cocaine and other drug use in the OB clinic, substance abuse support services were introduced in the clinic in April 1989 and are still continuing. Several strategies have been employed to improve prenatal care compliance and reduce substance use by prenatal patients identified with substance abuse problems. Women identified with substance abuse problems are assigned to attend the OB clinic during a special high-risk OB session held once each week. A substance abuse specialist facilitates this weekly one-and-a-half hour support group. The group functions primarily as a peer support group in which the women share their experiences, concerns, and successful strategies for reducing their drug use during pregnancy. The specialist is present to encourage interaction and to provide information when questions arise. As an added incentive, patients are provided with lunch and transportation costs. Women are allowed to bring non-school-aged children so that the absence of childcare is not an impediment to treatment participation.

We have recently conducted a preliminary analysis of several obstetrical outcome measures as a function of patient attendance at the support group. Attenders and non-attenders were comparable in demographic characteristics and in the severity of their drug and alcohol problems.

Overall, group attendance was found to impact positively on pregnancy outcome. Since low birthweight represents the second leading cause of death in US infants, we were particularly interested in impact on infant birthweight. As shown in the Figure, group attendance was found to correlate positively with birthweight ( $p < .008$ ), such that more frequent group attenders were found to give birth to higher weight infants. We are currently examining other important obstetri-

cal outcome measures such as gestational age, Apgar scores, and birth complications.

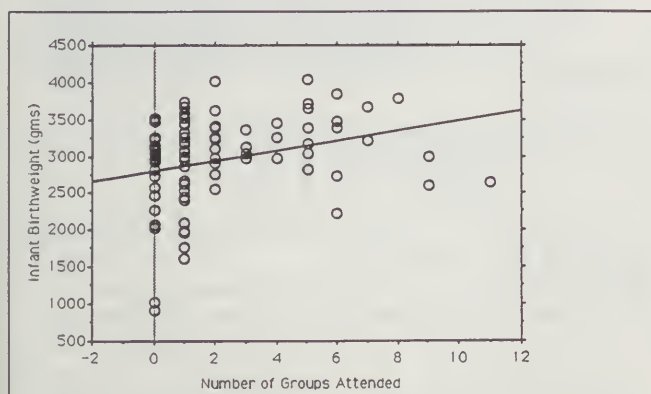
### Summary

Clearly, drug use during pregnancy has become quite widespread with well-documented direct and indirect negative consequences for women and their offspring. Effects include reduced birthweight, birth complications, neonatal drug withdrawal, poor nutrition, increased risk of serious infection, and unstable lifestyles. There are a number of steps that physicians in both public and private settings must take to address this important public health issue including screening, intervention, treatment referral, and follow-up.

Cocaine use by pregnant women using our clinic has increased dramatically in recent years. Cocaine-using women have been found to have a wider range of psychosocial and medical problems as well as generally poorer obstetrical outcomes than women who use other drugs during their pregnancies. Clearly all drug-using women are in need of prompt and ongoing intervention, particularly during their pregnancies. Findings from our ongoing OB support group suggest that even a once weekly peer-oriented intervention can significantly impact on pregnancy outcome for drug-using women. This intervention model appears to offer a low-cost, easy to implement strategy that can be developed in a variety of health care settings.

### References

1. Abel EI, Sokol RJ. Incidence of fetal alcohol syndrome and economic impact of FAS-related anomalies. *Drug Alcohol Depend* 1987; 19:51.
2. Chasnoff IJ, Burns WJ, Schnoll SH, Burns KA. Cocaine use in pregnancy. *N Engl J Med* 1985; 313:666-9.
3. Edelin KC, Gurganious L, Golar K, Oellerich D, Kyei-Aboagye K, Hamid MA. Methadone maintenance in pregnancy: Consequences to care and outcome. *Obstet Gynecol* 1988; 71(3):399-404.
4. Little BB, Snell LM, Palmore MK, Gilstrap LC. Cocaine use in pregnant women in a large public hospital. *Am J Perinatol* 1988; 5:206.
5. Sokol RJ, Miller SI, Debanne S, Golden N, Collins G, Kaplan J, Martier S. The Cleveland NIAAA prospective alcohol-in-pregnancy study: The first year. *Neurobehavioral Toxicology and Teratology* 1981; 3:203-9.
6. Janke JR. Prenatal cocaine use: Effects on perinatal outcome. *J Nurse Midwifery* 1990; 35:74-7.
7. Chasnoff IJ, Landress HJ, Barrett ME. The prevalence of illicit drug or alcohol use during pregnancy and discrepancies in mandatory reporting in Pinellas County, Florida. *N Engl J Med* 1990; 322:1202-6.
8. Smith IE, Lancaster JS, Moss-Wells S, Coles CD, Falek A. Identifying high-risk pregnant drinkers: Biological and behavioral correlates of continuous heavy drinking during pregnancy. *J Stud Alcohol* 1987; 48:304-9.
9. Zuckerman B, Frank DA, Hingson R et al. Effects of maternal



**Figure.** Relationship between group attendance and infant birthweight. Each patient (N=88) is represented by a data point; the regression equation was calculated using simple regression analysis.

- marijuana and cocaine use on fetal growth. *N Engl J Med* 1989; 320:762-8.
10. Ellwood DA, Sutherland P, Kent C, O'Connor M. Maternal narcotic addiction: Pregnancy outcome in patients managed by a specialized drug-dependency antenatal clinic. *Aust N Z J Obstet Gynecol* 1987; 27:92-8.
11. Hingson R, Gould JB, Morelock S, Kayne H, Heeren T, Alpert JJ, Zuckerman B, Day N. Maternal cigarette smoking, psychoactive substance use, and infant Apgar scores. *Am J Obstet Gynecol* 1982; 144:959-66.
12. Johnson SF, McCarter RJ, Ferencz C. Changes in alcohol, cigarette, and recreational drug use during pregnancy: Implications for intervention. *Am J Epidemiol* 1987; 126:695-702.
13. Little BB, Snell LM, Klein VR, Gilstrap LC. Cocaine abuse during pregnancy: Maternal and fetal implications. *Obstet Gynecol* 1989; 73:157.
14. Rosen TS, Johnson HL. Drug-addicted mothers, their infants and SIDS. *Ann N Y Acad Sci* 1988; 89.
15. Ernhart CB, Morrow-Tlucak M, Sokol RJ, Martier S. Under-reporting of alcohol use in pregnancy. *Alcohol Clin Exp Res* 1988; 12:506-11.
16. Chasnoff IJ, Burns KA, Burns WJ. Cocaine use in pregnancy: Perinatal morbidity and mortality. *Neurotoxicol Teratol* 1987; 9:291.
17. Cherukuri R, Minkoff H, Feldman J et al. A cohort study of alkaloidal cocaine ("crack") in pregnancy. *Obstet Gynecol* 1988; 72:147.
18. Finnegan LP. Management of maternal and neonatal substance abuse problems. In: Harris L, ed. *Problems of Drug Dependence*. NIDA Research Monograph #90. Washington, DC: US Government Printing Office. 1988; 177-82.
19. Finnegan LP. Effects of maternal opiate abuse on the newborn. *Federation Proceedings*, 1985; 44:56-9.
20. Stone ML, Salerno LJ, Green M, Zelson C. Narcotic addiction in pregnancy. *Am J Obstet Gynecol* 1971; 109:716.
21. Kaminski M, Franc M, Lebouvier M et al. Moderate alcohol use and pregnancy outcome. *Neurobehavioral Toxicology and Teratology* 1981; 3:173.
22. Kline H, Shrout P, Stein Z et al. Drinking during pregnancy and spontaneous abortion. *Lancet* 1980; 2:176.
23. Sokol RJ, Miller, SI. Identifying the alcohol abusing obstetric/gynecologic patient: A practical approach. *Alcohol Health & Research World* 1980; 4:3.
24. Connaughton JF, Reeser D, Schut J, Finnegan LP. Perinatal addiction: Outcome and management. *Am J Obstet Gynecol* 1977; 129:679-86.
25. Finnegan LP. The effects of narcotics and alcohol on pregnancy and the newborn. *Ann N Y Acad Sci* 1981; 362:136-57.
26. Finnegan LP, Kron RE, Connaughton JF, Emich JP. Neonatal abstinence syndrome: Assessment and management. *Addictive Diseases* 1975; 2:141-58.
27. O'Connor MC. Drugs of abuse in pregnancy - An overview. *Med J Aust* 1987; 147:180-3.
28. Rodgers BD, Lee RV. Drug abuse. In: Burrow GN, Ferris TF, eds. *Medical Complications During Pregnancy*. Philadelphia: WB Saunders. 1988; 570-9.
29. Bingol N, Fuchs M, Diaz V, Stone RK, Gromisch DS. Teratogenicity of cocaine in humans. *J Pediatr* 1987; 110:93-6.
30. Lester BM, Corwin MJ, Sepkoski C, Seifer R, Peucker M, McLaughlin S, Golub HL. Neurobehavioral syndromes in cocaine exposed newborn infants. *Child Dev* (In Press).
31. Oro AS, Dixon SD. Perinatal cocaine and methamphetamine exposure: Maternal and neonatal correlates. *J Pediatr* 1987; 111:571-8.
32. Russell M, Skinner JB. Early measures of maternal alcohol misuse as predictors of adverse pregnancy outcomes. *Alcohol Clin Exp Res* 1988; 12(6):824.
33. Ryan L, Ehrlich S, Finnegan L. Cocaine abuse in pregnancy: Effects on the fetus and newborn. *Neurotoxicol Teratol* 1987; 9:295-9.
34. Mitchell M, Sabbagha RE, Keith L, MacGregor S, Mota JM, Minoque J. Ultrasonic growth parameters in fetuses of mothers with primary addiction to cocaine. *Am J Obstet Gynecol* 1988; 159:1104-9.
35. Chouteau M, Namerow PB, Leppert P. The effect of cocaine abuse on birthweight and gestational age. *Obstet Gynecol* 1988; 72:351.
36. Folroth RF, Durand DJ, Nicherson BG, Espinoza AM. Prenatal cocaine exposure is not associated with a large increase in the incidence of SIDS. *Pediatr Res* 1989; 25:215A.
37. Lounsbury B, Lifshitz M, Wilson GS. In utero exposure to cocaine and the risk of SIDS. In: Harris L, ed. *Problems of Drug Dependence*. NIDA Research Monograph #95. Washington, DC: US Government Printing Office 1989; 352.
38. Chasnoff IJ. Drug use in pregnancy: Parameters of risk. *Pediatr Clin North Am* 1988; 35:1403.
39. Chaisson RE, Bacchetti P, Osmond D, Brodie B, Sande MA, Moss AR. Cocaine use and HIV infection in intravenous drug users in San Francisco. *JAMA* 1989; 261:561-5.
40. American Psychological Association. *Pediatric AIDS and human immunodeficiency virus infection: Psychological issues*. *Am Psychol* 1989; 44:258-64.
41. Friedland GH, Klein RS. Transmission of the human immunodeficiency virus. *N Engl J Med* 1987; 317:1125-35.
42. Falloon J, Eddy J, Wiener L, Pizzo PA. Human immunodeficiency virus infection in children. *J Pediatr* 1989; 114:1-38.
43. Mok JQ, Giaquinto C, DeRossi A, Grosch-Worner I, Ades AE, Peckham CS. Infants born to mothers seropositive for human immunodeficiency virus. *Lancet* 1987; 1:1164-68.
44. Scott GB, Fischl MS, Klimas N et al. Mothers of infants with the acquired immunodeficiency syndrome. *JAMA* 1985; 253:363.
45. Chavkin W. Drug addiction and pregnancy: Policy crossroads. *Am J Public Health* 1990; 80:483-7.
46. Sokol RJ, Martier SS, Ager JW. The TACE questions: Practical prenatal detection of risk-drinking. *Am J Obstet Gynecol* 1989; 160:863-70.
47. Selzer ML, Vinokur A, van Rooijen L. A self-administered Short Michigan Alcoholism Screening Test (SMAST). *J Stud Alcohol* 1975; 36:117-26.
48. Little BB, Streissguth AP, Guzinski GM. Prevention of fetal alcohol syndrome: A model program. *Alcohol Clin Exp Res* 1980; 4:185-9.
49. Rosett HL, Weiner L. Identifying and treating pregnant patients at risk for alcohol. *Can Med Assoc J* 1981; 125:149-54.
50. Green M et al. Outcomes of pregnancy for addicts receiving comprehensive care. *Am J Drug Alcohol Abuse* 1979; 6:413-29.
51. Suffet F, Bryce-Buchanan C, Brotman R. Pregnant addicts in a comprehensive care program: Results of a follow-up survey. *Am J Orthopsychiatry* 1981; 51:297-306.



52. Rosett HL, Weiner L, Lee A, Zuckerman B, Dooling E, Openheimer E. Patterns of alcohol consumption and fetal development. *Obstet Gynecol* 1983; 61:539-46.
53. Rosett HL, Ouellette EM, Weiner L, Owens E. Therapy of heavy drinking during pregnancy. *Obstet Gynecol* 1978; 51:41-6.
54. Dahlgren L, Willander A. Are special treatment facilities for female alcoholics needed: A controlled 2-year follow-up study from a specialized female unit (EWA) versus a mixed male/female treatment facility. *Alcohol Clin Exp Res* 1989; 13:499-504.
55. McLellan AT, Luborsky L, Woody GE, O'Brien CP. An improved diagnostic evaluation instrument for substance abuse patients: The Addiction Severity Index. *J Nerv Ment Dis* 1980; 168:26-33.
56. Andreasen N. The family history method using diagnostic criteria. *Arch Gen Psychiatry* 1977; 34:1229-35.
57. Mayfield DG, McLeod G, Hall P. The CAGE questionnaire: Validation of a new alcoholism screening instrument. *Am J Psychiatry* 1974; 131:1121-23.
58. Maryland Health Department. Primary and secondary syphilis cases and rate (per 100,000 population) - 1980-1989. Maryland Counties and Baltimore City (excluding Military). Table, 1990. ■

## We Build Beautiful Sunlit Home Additions



**Sunspace Design Studio, Inc.**

**(301) 882-6200**

MHIC 16069

## FRIENDS

SCHOOL OF BALTIMORE

**PRE-PRIMARY & LOWER SCHOOL** has expanded. Our bright new facilities allow for smaller homerooms and even more personalized attention.

**MIDDLE SCHOOL** concentrates on developing individual potential and self-esteem, while preparing students to take their place as world citizens.

**UPPER SCHOOL** offers students challenging academics and a complete sports program. In recent years, 30% of Friends seniors have been recognized for their outstanding achievement by the National Merit Scholarship Corporation.

## OPEN HOUSE

**Sunday, November 10**

**2:00 p.m.**

*Child care will be available.*

**(301) 435-2800**

## The Johns Hopkins Hospital



### PHYSICAL THERAPY OCCUPATIONAL THERAPY PHYSIATRY CONSULTATION SERVICE

**Providing Rehabilitation Services including specialties in the areas of:**

#### SPINE REHABILITATION

- Spinal evaluation and treatment
- Back School Education
- Postoperative back evaluation and treatment

#### ORTHOPEDICS

- Postoperative joint rehabilitation
- Rehabilitation of musculoskeletal injury
- Foot Orthotic evaluation/fabrication
- Prosthetic training
- TMJ

#### PEDIATRICS

- Evaluation and treatment of premature infants through adolescents
- Cystic Fibrosis Pulmonary and Exercise Programs

#### NEUROSCIENCES

- Chronic Pain Management
- Evaluation and treatment of neurological disorders
- Geriatric Fall Precautions Screening
- Multiple Sclerosis Patient Screening

#### MEDICINE

- Geriatric Assessment
- Arthritis evaluation and treatment
- High Risk Pregnancy
- AIDS Rehabilitation

#### SURGERY

- Amputee Rehabilitation
- Early postoperative intervention
- Postoperative organ transplantation rehabilitation

#### ONCOLOGY

- Rehabilitation Post Bone Marrow Transplantation
- Leukemia Rehabilitation

#### CARDIAC REHABILITATION

- Postoperative intervention
- Postoperative Heart, Lung and Heart/Lung Transplant Rehabilitation
- Phase 1 Cardiac MI program

#### PSYCHIATRY

- Pediatrics through Geriatrics
- Inpatient, Day Hospital, Outpatient

#### HANDS

- Static and Dynamic Orthotics
- Hand Surgery/Cumulative Trauma Rehabilitation

### THE JOHNS HOPKINS HOSPITAL

For more information on our inpatient and outpatient programs contact:

**The Rehabilitation Medicine Department**

Osler 159

600 North Wolfe Street

Baltimore, Maryland 21205

(301) 955-5693

# QUALITY

## THE HOPKINS TRADITION

# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.

## **Magnetic Imaging of Baltimore**



*Lumbar Spine*

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)



---

# Premenstrual Syndrome Update: 1991\*

---

Ivan A. Backerman MD, FACOG

---

*Dr. Backerman is President of the Atlanta Obstetrical and Gynecological Society and is a Clinical Instructor in the Department of Obstetrics - Gynecology, Emory University School of Medicine, Atlanta, GA.*

**T**he premenstrual syndrome (PMS) may be defined as the cyclic recurrence, during the luteal phase of the menstrual cycle, of a combination of physical and psychological and/or behavioral changes of enough severity to deteriorate interpersonal relationships or interfere with normal activities. Although exact incidence figures are not available, PMS is a common and important problem in many countries of the world. Its importance lies not only in the discomforting physical and mood symptoms with which it is associated, but in the way it interferes with an affected woman's home life, disturbs her family, and lowers her self-esteem. The condition was first defined as a syndrome in 1931 by Robert T. Frank MD, an American gynecologist.<sup>1</sup> His information about PMS did not gain widespread recognition at the time, probably because the publication in which it appeared, *Archives of Neurology and Psychiatry*, usually was not read by members of the general medical profession.

Dr. Frank stated,

the group of women to whom I refer especially complain of a feeling of indescribable tension, from ten to seven days preceding menstruation, which in most instances continues until a time that the menstrual flow occurs. The patients complain of unrest, irritability, feeling like jumping out of their skin, and a desire to find relief by foolish and ill-considered actions. Their personal suffering is intense and it manifests itself in many reckless, and sometimes reprehensible, actions. Not only do they realize their own suffering but they feel conscience stricken toward their husbands and families, knowing well that they are unbearable in their attitudes and their reactions. Within an hour or two after the onset of the menstrual flow complete relief from both physical and mental tension occurs.

In 1934, the late gynecologist, S. Leon Israel MD,<sup>2</sup> was the first person to propose that this syndrome was possibly caused by defective luteinization resulting in a progesterone deficiency and a relative hyper-estrogenic

---

\*Presented at Frederick Memorial Hospital, March 15, 1991, as the Eighth Annual Brinkley Memorial Lecture.

---

*Premenstrual syndrome (PMS) was first identified in 1931 and currently affects millions of women on a physical and emotional basis. However, Buspirone has been found to be a safe and markedly effective agent in the management of this condition.*

---

state in the female patient. It became common practice to treat PMS with progesterone. (However, the idea of relieving all PMS symptoms with progesterone supplementation has been shown to be no more effective than that of placebo therapy.) In 1953, the eminent English clinician, Katherine Dalton, proposed the term premenstrual syndrome.<sup>3</sup> She was the first individual to coin the name and the phrase, PMS. As a result of the women's movement in 1982, people became interested in PMS, a condition that might trouble millions of women (and allegedly had never been given its due by male dominated science and medicine) and a treatment that might give relief but had been ignored and suppressed by the medical establishment. According to Dr. Leon Speroff,<sup>4</sup> "In 1982, PMS became a national industry." The approach to the treatment of PMS became nearly as difficult as establishing hard scientific criteria as to who had PMS and who had neurotic behavior associated with some other organic disorder. The symptoms of PMS are divided into physical and psychological. With some variations, the patients generally conform to Dr. Frank's definition.

Physical symptoms of PMS (Tables 1 and 2) are represented by generalized aches and pains or malaise, headaches, chest pain, breast pain and tenderness (mastalgia), nipple tenderness, backache, and a great deal of abdominal discomfort and pain. The general abdominal symptoms of PMS include dizziness, bloating, discomfort, diarrhea, fullness or cramps, constipation, thirst, craving for sugar and/or salt, increased or decreased urination, and increased or decreased appetite. Many of these symptoms are also seen in the first trimester of pregnancy as a pronounced response to progesterone.

Before making a diagnosis of PMS, patients who are seen with extreme thirst, craving for sugar, increased urination, and decreased appetite should undergo a glucose tolerance test. It should be noted, however, that although the symptomatology may mimic that of diabetes, there is no particular relationship between diabetes and PMS.

Mood Changes

PMS has been described as a significant disorder of mood

Table 1. Physical Symptoms of PMS

- |                               |                                 |
|-------------------------------|---------------------------------|
| • Generalized aches and pains | • Breast pain and tenderness    |
| • Headache                    | • Abdominal discomfort and pain |
| • Chest pain                  | • Backache                      |

Table 2. General Abdominal Symptoms of PMS

- |                      |                                    |
|----------------------|------------------------------------|
| • Bloating           | • Diarrhea                         |
| • Discomfort         | • Constipation                     |
| • Fullness or cramps | • Increased or decreased urination |
| • Thirst             | • Increased or decreased appetite  |
| • Craving            |                                    |
| • Dizziness          |                                    |

(Table 3). Many individuals have thought that the patient with typical PMS represents a depressed state. As with many other mood changes, some of the patients with PMS may have depression. For the most part, it has been my clinical experience that PMS patients exhibit a great deal of anxiety, a great deal of hostility, and an inability to cope characterized by the inability to concentrate, as well as general inefficiency and indecisiveness. The PMS patient basically has low self-esteem and does not like herself. She feels a sense of unattractiveness, a great deal of dissatisfaction with everything, and a good bit of tension. These patients may also experience withdrawal, confusion, excitation, aggression, irritability, some sadness, decreased sexual feeling, absence of libido, and insomnia. The negative effects of mood in the PMS patient usually occur during the late luteal phase of the menstrual cycle or seven to ten days prior to the onset of menstrual flow.

Diagnosing PMS

Clinical guidelines can assist in the process of diagnosis for PMS (Table 4). When diagnosing PMS, the clinician should look initially for the mood and physical symptomatology to consistently recur during the premenstrual phase of the patient's menstrual cycle. Second, and of great importance, the symptom severity must be sufficient to affect a woman's daily life. If the symptomatology does not affect the patient's daily life in an adverse manner and cause great difficulty in her ability to function in the work place or at home, then these patients should be excluded from the strict diagnosis of PMS. Patients who have menstrual irritability and have some symptomatology during the late luteal phase do not necessarily have PMS. The symptomatology onset must be close to the middle of the menstrual cycle and should completely disappear at the time of the menstrual flow. There should be an interval during the first half of the menstrual cycle when the patient feels pretty much her normal self. Last, there should be an absence of other physical symptoms, physical illness, or organic disorders that could explain some of the symptomatology. For example, it would be important to rule out pelvic inflammatory disease, low grade chlamydial infection, endometriosis, adenomyosis, brain tumor, or a major psychiatric disorder.

Table 3. Negative Effects of PMS on General Mood

- |                                   |                            |
|-----------------------------------|----------------------------|
| • Inability to concentrate        | • Tension                  |
| • General inefficiency            | • Withdrawal               |
| • Indecisiveness                  | • Confusion                |
| • Slowness                        | • Excitation               |
| • Disinterest in people           | • Aggression               |
| • Sense of unattractiveness       | • Irritability             |
| • Dissatisfaction with everything | • Sadness                  |
| • Fatigue                         | • Decreased sexual feeling |
|                                   | • Difficulty sleeping      |



It is extremely important to establish that the patients being classified as having PMS actually have a difference in their behavior and emotional patterns during the menstrual flow as opposed to the late luteal phase of their menstrual cycle. This can be accomplished with a good clinical history and simple psychometric testing like the Hamilton A Anxiety Rating scale or the Hamilton D Depression Rating scale, or perhaps with even more complex psychometrics such as the Minnesota Multiphasic Personality Inventory (MMPI).

It is not infrequent to evaluate these patients by giving them psychometric testing twice, once during the late luteal phase and once during menses. It is amazing that the typical PMS patient behaves in a very normal manner, has a normal affect, has normal behavior, has no anxiety, and can be classified as a relatively normal individual during her period. Whereas during the last luteal phase, she may exhibit bizarre behavior and a very different pattern including aggression, hostility, a great deal of mixed emotional conflict, and an inability to cope.

It is important to separate patients diagnosed as having PMS from patients who might have some organic illness which could mimic the physical symptoms and eventually create a certain degree of mood change and anxiety as well as from patients who have psychiatric disorders of a significant nature. Patients with psychiatric disorders test abnormally on the MMPI at anytime during the month. Even though it is well-known that some patients with major psychiatric disorders can have some increased intensity of symptoms during the late luteal phase, they are pretty much psychiatrically disturbed during the entire month; it makes no significant difference whether they are tested during the beginning of their cycle or during the late luteal phase. In 20 to 30 percent of institutionalized psychiatric patients, there is an increase in the need for medication during the late luteal phase of the cycle. So, it is not uncommon to see that the late luteal phase of the menstrual cycle may aggravate emotional disorders in general, and anxiety especially, but it is not the same as the patient with PMS who is essentially normal and who has no behavioral problems and no symptoms attributable to a psychiatric problem except during the late luteal phase.

**Table 4. Clinical Guidelines for Diagnosis of PMS**

When diagnosing PMS, the clinician should look for:

- Mood and physical symptoms consistently recurring during the premenstrual phase of the menstrual cycle.
- Symptom severity sufficient to affect a woman's daily life.
- Symptom onset close to middle of menstrual cycle, abating at time of menstruation.
- An interval when a woman feels pretty much her normal self during the first half of the menstrual cycle.
- Absence of other illnesses which would completely explain the symptoms.

Recently, the National Institute for Mental Health and the National Institute for Children's Health and Human Development (NICHD) worked together in trying to establish severe PMS as a separate disorder classifiable in the *Diagnostic and Statistical Manual of Mental Disorders*, Third Edition (*DSM-III-R*) as a codeable psychiatric entity referred to as Late Luteal Phase Dysphoric Disorder. The latest issue of the *DSM-III-R* lists Late Luteal Phase Dysphoric Disorder in the appendix but it has not reached the level of a codeable diagnosis.

As a gynecologist interested in primary care in women, I do not believe it is necessary to add a new name and give it a new designation. Severe PMS is still, in my opinion, not classifiable as a psychiatric disorder.

**Assessing Patients for PMS**

Assessing patients for PMS is an ongoing process (Table 5). It should be carried out during at least a ninety-day period of time or through three menstrual cycles. It is best that no medication be given during the assessment. The patient should be instructed to keep a daily symptom diary, which should be reviewed with the patient at four-week intervals. The most important thing physicians can do during this ninety-day assessment period is to assure the patient that what is wrong with them is a *real* condition and that it is something that can be treated successfully.

During this time, it is also appropriate to perform basic psychometric testing. For those patients who cannot afford extensive psychometric testing with the MMPI or who are unwilling to go through extensive testing, and for patients who live where the MMPI is not readily available, I recommend the Hamilton Anxiety Rating scale (Table 6). The scale is a simple rating of zero through four and is easy enough to use as a simple checklist. It only takes a few minutes to rate these patients during the menstrual flow period as well as during the late luteal phase of the menstrual cycle and see the *marked* difference in the patient's score.

During the evaluation period, the patient should be encouraged to change her diet, to change her activity level (exercise), and to participate in self-help or coping sessions. Dietary changes should include an increase in green vegetables, an increase in carbohydrates, and avoidance of salt, red meat, caffeine, high cholesterol foods, and alcohol.

In addition to changing the physical aspects of the patient's life, it is important to help her with self-coping. This would best remedy itself if there existed self-help organizations for

**Table 5. Assessing for PMS**

- Ongoing process
- Vital initial phase of therapy
- No medication to be given during assessment
- Evaluate for two to three cycles:
  - Instruct patient to keep daily symptom diary
  - Review diary with patient
  - Correlate diary with life events

coping with PMS. However, at this time, few, if any, exist. Patients must be forced out of their rut, removed from their withdrawn state, and encouraged to participate in life and change some of their bad life patterns. I encourage them, if they have the desire, to go back to school, and to get involved with their church, re-establish old friendships, make new friendships, find hobbies, and raise their self-esteem by changing the way they dress and wear their hair and make-up.

The significance of the first ninety days without medication, the relationship between the patient and the physician, and the changing of the patient's lifestyle and ability to cope, represent a significant move forward in therapy resulting in a 30 percent remission rate. This 30 percent remission in PMS patients has been described as the "placebo-response."<sup>5</sup>

### Biological Theories

To date, there is no firm evidence to substantiate any one biological theory for the etiology of PMS.<sup>6</sup> The theories include low estrogen levels, high estrogen levels, falling estrogen levels, changes in the estrogen/progesterone ratios, increased aldosterone activity, increased renin-angiotensin activity, increased adrenal activity, endogenous endorphin withdrawal, subclinical hypoglycemia, central changes in the catecholamines, response to prostaglandins, vitamin deficiencies, and excess prolactin.

Because of the lack of theory validation, many of the treatments that have been used in the past such as progesterone supplementation with suppositories or with intramuscular injections or micronized progesterone, have been shown to produce no more than a 20 percent beneficial response. Drs. Freeman, Rickels, Sondheim and Polansky<sup>7</sup> recently demonstrated that progesterone vaginal suppositories are not only ineffective in the treatment of PMS but less than 20 percent of patients gain any benefit and, for the most part, progesterone may actually aggravate PMS. The NICHD also reported that patients who used progesterone had, as a result, a definite aggravation of their PMS except in that small group of approximately 20 percent who seem to respond to almost any type of therapy.

### Medications

Many medications have been used in the treatment of PMS with no better than a 20 percent response including bromocriptine, danazol, vitamin B<sub>6</sub> (pyridoxine), clonidine, beta blockers, the LNRH agonist, and the GNRH agonist. Many of these also produce symptoms of their own which may be undesirable. Other medications that have been used with a good bit of success for the physical symptoms of PMS and, occasionally, the tension and irritability associated with PMS, are the prostaglandin synthetase inhibitors also known as the non-steroidal anti-inflammatory drugs. Some extensive studies have shown that mefenamic acid (Pomstel) is better than a placebo and, recently, naproxen sodium

**Table 6. Hamilton Anxiety Rating Scale\***

0=None, 1=Mild, 2=Moderate, 3=Severe, 4=Very severe, incapacitating

Item	Ratings
<b>Anxious Mood</b>	
Worries, anticipation of the worst, fearful anticipation, irritability	
<b>Tension</b>	
Feelings of tension, fatigability, startle response, moved to tears easily, trembling, feelings of restlessness, inability to relax	
<b>Fear</b>	
Of dark, of strangers, of being left alone, of animals, of traffic, of crowds	
<b>Insomnia</b>	
Difficulty in falling asleep, broken sleep, unsatisfying sleep and fatigue on waking, dreams, nightmares, night terrors	
<b>Intellectual (Cognitive)</b>	
Difficulty in concentration, poor memory	
<b>Depressed Mood</b>	
Loss of interest, lack of pleasure in hobbies, depression, early waking, diurnal swing	
<b>Behavior at Interview</b>	
Fidgeting, restlessness or pacing, tremor of hands, furrowed brow, strained face, sighing or rapid respiration, facial pallor, swallowing, belching, brisk tendon jerks, dilated pupils, exophthalmos	
<b>Somatic (Sensory)</b>	
Tinnitus, blurring of vision, hot and cold flushes, feelings of weakness, picking sensation	
<b>Cardiovascular Symptoms</b>	
Tachycardia, palpitation, pain in chest, throbbing of vessels, fainting feelings, missing beat	
<b>Gastrointestinal Symptoms</b>	
Difficulty in swallowing, wind, abdominal pain, burning sensations, abdominal fullness, nausea, vomiting, borborygmi, looseness of bowels, loss of weight, constipation	
<b>Respiratory Symptoms</b>	
Pressure or constriction in chest, choking feelings, sighing, dyspnea	
<b>Genitourinary Symptoms</b>	
Frequency of micturition, urgency of micturition, amenorrhea, menorrhagia, development of frigidity, premature ejaculation, loss of libido, impotence	
<b>Autonomic Symptoms</b>	
Dry mouth, flushing, pallor, tendency to sweat, giddiness, tension headache, raising of hair	
<b>Somatic (Muscular)</b>	
Pains and aches, twitchings, stiffness, myoclonic jerks, grinding of teeth, unsteady voice, increased muscular tone	

\*Hamilton M. The Assessment of Anxiety States by Rating. *Br J Med Psychol* 1959; 32:50-5.



(Anaprox double strength) has been used as an effective prostaglandin blocking agent. It should be pointed out that no matter which non-steroidal anti-inflammatory drug is used, there is a good response to the physical symptomatology but that none of the prostaglandin blocking agents have a significant effect in the treatment of the patient's mood and emotional symptomatology.

I have had some excellent results in young patients willing to use low-dose, combined oral contraceptive pills for controlling their menstrual cycle and obliterating the late luteal phase. My findings have been that a combination of mild diuretics (preferably of the spironolactone type), a low-dose combined (monophasic) oral contraceptive pill, and a prostaglandin blocking agent has produced a 60 to 70 percent beneficial effect in physical and emotional symptomatology.

It should be pointed out that PMS is seen in each decade of life until approximately age fifty. It is characteristic of PMS that the severity increases with each decade of life so that patients who have PMS in their twenties have a much worse time with PMS in their thirties and an even worse time in their forties. The worst PMS seems to occur in patients between thirty-eight and forty-four. PMS completely stops with the onset of menopause, but can reoccur in patients who are put on estrogen replacement therapy and progesterone supplementation to prevent endometrial carcinoma in the non-hysterectomized post-menopausal woman.

Regarding the etiology and mechanism of PMS, it is generally believed, but not conclusively documented, that PMS may well be the result of a hypersensitivity in the serotonin 1A receptors in the cortex of the brain enhanced by the late luteal phase of the menstrual cycle. Based on work recently published, and based on personal experience, I believe that progesterone may well be the aggravating factor in the late luteal phase that triggers this hypersensitivity at the serotonin 1A receptor in the brain; therefore, to successfully treat PMS, it is imperative to treat PMS physically and also treat the anxiety aspects and the behavioral aspects from a neuropharmacologic point of view.

The drugs (Table 7) used classically in anxiety treatment included alcohol, opiates, belladonna, bromides, and barbiturates, followed by meprobamate and then the phenothiazines. Today, phenothiazines are still being given to institutionalized psychiatric patients. Most physicians are rather leery of using the phenothiazine drugs because of extrapyramidal tract convulsions and also because in significant therapeutic doses, phenothiazines may produce extreme sedation and an inability to function in a normal manner. The antihistamines such as Phenergan, Vistaril, and Benadryl have been used because of their sedative effects, but these are not safe for the treatment of anxiety in an ambulatory patient. The benzodiazepines began with Chlordiazepoxide or Librium then Diazepam or Valium and on through a host of combinations of various types of benzodiazepines that have evolved into the latest and shortest-acting benzodiazepine known as alprazolam or Xanax. Alprazolam has

been studied extensively in the management of PMS with excellent results in the management of anxiety.

In my experience, giving PMS patients alprazolam for seven to ten days in small doses has been extremely beneficial in the management of the patient's anxiety. However, giving this highly euphorogenic substance to PMS patients who may have addictive-type personalities results in the failure to comply (they may take the medication every day). The patient would rather take the medication over a longer period of time and continue to increase her dose because of the euphoria that is accompanied by benzodiazepines. Again, my clinical experience and that of others has been that the use of the benzodiazepines in the treatment of anxiety is most effective in short-term use. For persistent or sustained anxiety, the continued use of the benzodiazepines may result in increased dosage and addiction. The side effects of the benzodiazepines are impairment of psychomotor function and coordination and, in many cases, the inability to drive a motor vehicle, function in the work place, and function at home. Thus, we may have a medication which is excellent for the anxiety of PMS but once again places the PMS patient in a position of being unable to function properly. And, as was originally stated in the guidelines for diagnosing PMS, we do not want to substitute a patient who cannot function in the work place because of PMS for a patient who cannot function in the work place because of her medication.

Tricyclic, one of the classic antidepressants, has had very little benefit in patients with PMS. The newest antidepressant, fluoxetine, has been used extensively for people with depression. I believe there are certain problems in the chronic use of this medication in patients with PMS. One of the neuropharmacologic disadvantages of the use of fluoxetine is the increase in serotonergic activity. I believe that anxiety is generally a serotonergic effect and that patients who are taking this medication for any prolonged length of time have a marked increase in serotonin activity and a marked increase in anxiety.

My patients who have PMS and have used fluoxetine have had an initial beneficial effect for several days and then have had a tremendous amount of anxiety. The patients have had to take some type of tranquilizer to come down from the anxiety effects of increased serotonin in the cortex.

The beta blockers have been used extensively and with no better effect in PMS than 20 percent or less.

**Table 7. Drugs Used in Anxiety Treatment**

Alcohol, opiates  
Belladonna, bromides  
Barbiturates  
Meprobamates  
Phenothiazines  
Antihistamines  
**Benzodiazepines**  
Antidepressants  
Beta blockers  
Azapirones



## Buspirone

This brings us to an entirely new class of medications, the azapirones.<sup>8,9</sup> The azapirones are a new generation of serotonergic anxiolytics that are an entirely different group of chemical compounds. The azapirones act primarily as a serotonin 1A receptor agonist in the pre-synaptic neurons and a partial agonist in the post-synaptic neurons. Buspirone<sup>10-11</sup> or Buspar is the only azapirone available for prescription writing. The second generation azapirone, Gepirone, is in phase three studies and should be available in the future.

Buspirone is not a controlled substance. It is not a habit-forming drug, and there is no abuse potential. There is also no withdrawal symptomatology on abrupt cessation and there is no euphoria. Buspirone is not a tranquilizer; it does not cause sedation or any effects on psychomotor coordination.

It is important to place the azapirones in a separate category from the drugs commonly called tranquilizers. Tranquilizers are sedatives. They produce euphoria, are usually addicting, and may cause withdrawal convulsions.

There are major differences between the benzodiazepines and Buspirone (Table 8). Both Buspirone and the benzodiazepines are quite effective in the management of anxiety. On the other hand, the benzodiazepines have anticonvulsant effects, are sedatives, are muscle relaxants, may cause functional impairments, interact with the central nervous system depressants, and may cause abuse and physical dependence problems. However, with Buspirone, only the positive effects on anti-aggression, conflict, and conditioned avoidance are seen.

In a study on the use of Buspirone in PMS patients by Daniel David and his coworkers from the University of East Tennessee,<sup>12</sup> patients with mild PMS showed an 80 percent helpful response, patients with moderate PMS showed a 92 percent helpful response, and patients with marked PMS showed a 100 percent helpful response. All patients who responded had been on tranquilizers previously. When questioned, they indicated they were more willing to accept Buspirone than they were their previous tranquilizers, apparently because it affected their PMS positively without any of the side effects usually associated with other types of tranquilizers.

What I find most interesting about Dr. David's study is that the more severe the PMS was, the better the response to Buspirone. This experience parallels my own clinical experience with the use of Buspirone in PMS.

PMS patients whom I have managed with Buspirone have been treated with a large prescription of ten milligram tablets with a dosing protocol of one-half of one ten milligram tablet three times daily for the first four days followed by one full tablet three times daily beginning with the first day of the menstrual cycle and continuing throughout the entire cycle for at least three menstrual cycles. When I have treated patients with thirty milligrams of Buspirone daily for ninety days, I have obtained a 96 percent success rate in severe PMS.

Following this, other treatment options are: to take the patient off Buspirone to see if it has effected a remission; to reduce the dose of Buspirone to twenty milligrams per day; or to cycle the patient using Buspirone beginning on the seventh or eighth day of the menstrual cycle and continuing the Buspirone until the onset of the menstrual flow. My patients enjoy being cycled with Buspirone because they feel they are having a cyclic problem and they are more comfortable with cyclic therapy. It has been my experience over the past few years that the results in the treatment of PMS with Buspirone are excellent with cyclic therapy and approximately 2 to 4 percent better with continuous therapy. Buspirone is not an as needed (PRN) medication. It takes at least seven days to effect a significant level in the cortex to alleviate anxiety. There is a lead time which must be followed in order to get the maximum beneficial effect of the proper level of Buspirone in the cortex to block the serotonin 1A receptors.

Buspirone can be compared favorably with any of the benzodiazepines; it takes just as long for even the short-acting benzodiazepines to alleviate anxiety as it does Buspirone. The difference is that when giving a benzodiazepine, we obtain sedation for the anxious or hysterical patient, but the patient also develops euphoria which masks the patient's actual state of anxiety.

Buspirone contributes no euphoria and no sedation. The advantage of the use of Buspirone over any of the benzodiazepines is that it does not cause addiction. It should also be noted that neuropharmacologically, Buspirone does not effect the GABA receptors, does not affect other parts of the brain, and produces no incoordination or psychomotor disturbances. Buspirone does not elevate the mood of the patient by producing euphoria but instead "normalizes" the serotonergic state that we see in the patient with PMS, resulting in a positive change in the patient's feeling without a complete change in the patient's personality.

One of the distinct advantages of Buspirone is that there is no synergistic relationship between buspirone and other medications classically used in preoperative, postoperative or operative patients. Also, patients who are doing well with PMS can return to social drinking while taking Buspirone; there is no increase in the effect of alcohol as there is with the use of typical tranquilizer medications.

Table 8. Buspirone: Anxioreselective Profile<sup>13</sup>

	Buspirone	Benzodiazepines
Antiaggression	+	+
Conflict	+	+
Conditioned avoidance	+	+
Anticonvulsant	-	+
Sedation	-	+
Muscle relaxation	-	+
Functional impairment	-	+
Interaction with central nervous system depressants	-	+
Abuse potential/physical dependence	-	+



## Summary

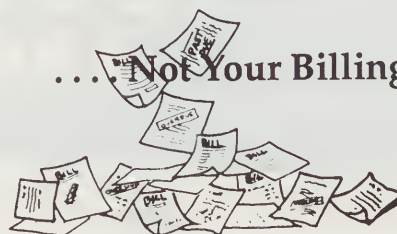
I have outlined the history of PMS and its physical and emotional symptoms. I have presented guidelines for diagnosing PMS, and shown how to assess the PMS patient. I have discussed how the physical aspects of PMS can be dealt with using diuretics and prostaglandin blocking agents. I have reviewed a new theory for the etiology of PMS. I have discussed the use of the new class of serotonergic anxiolytics referred to as azapirones and the only azapirone available for prescription use, Buspirone. I have demonstrated the significance of the use of Buspirone in patients with PMS. I have outlined the mechanism of action of Buspirone on the serotonin 1A receptors in the brain as an agonist in the pre-synaptic neurons and as a partial agonist in the post-synaptic neurons. I have discussed the superiority of the use of Buspirone for anxiety and PMS over benzodiazepines as that of lack of abuse and lack of addiction. The characteristics of Buspirone are that it is a non-controlled substance not regulated by the drug enforcement agency, it is safe, and it has been markedly effective in the management of my patients with PMS.

## References

1. Frank RT. The hormonal causes of premenstrual tension. Archives of Neurology and Psychiatry 1931; 26:1054.
2. Israel S. Premenstrual tension JAMA 1934; 110:1721.
3. Greene R, Dalton K. The premenstrual syndrome. Br Med J 1953; 1:0007.
4. Speroff L. Historical and social perspectives in PMS. In: Keye WR, ed. Premenstrual Syndrome. Philadelphia: WB Saunders Co. 1988.
5. Eisenberg L. The subjective in medicine. Perspect Biol Med 1983; 27:57.
6. Reid RL. Etiology: Medical theories PMS. In: Keye WR, ed. Premenstrual Syndrome. Philadelphia: WB Saunders Co. 1988.
7. Freeman E, Rickels K, Sondheimer S, Polansky M. Ineffectiveness of progesterone suppository treatment for premenstrual syndrome. JAMA 1990; 264(3):349-53.
8. Eison MS. The new generation of serotonergic anxiolytics and their possible clinical roles. Psychopharmacology 1988; 96 (supplement):54.
9. Eison MS. The new generation of serotonergic anxiolytics: Possible clinical roles. Psychopathology 1989; 22 (supplement 1): 13-20.
10. Neppé VM. The clinical neuropharmacology of Buspirone. In: Innovative Psychopharmacology. New York: Raven Press. 1989; 35-57.
11. Rickels K, Freeman E, Sondheimer S. Buspirone in treatment of premenstrual syndrome. Lancet 1989; 1:777.
12. David D, Freeman A, Harrington TM, Downey DB, Weart W, Albrecht D, Miller E, Norton J, Rumbo N, Roth N, Milo K. Buspirone for anxious women in a primary care environment - A multi-center open evaluation. Advances in Therapy 1987; IV:251-84.
13. Eison AS, Temple DL. Buspirone: Review of its pharmacology and current perspectives on its mechanism of action. Am J Med 1986; 80(3B):1-9.

## You Should Be Taking Care of Your Patients

... **Not Your Billing**



**PPBSi**

Physician's Professional Billing Services, Inc.

**Leaders in technological billing since 1976**

...

Will speed up your cash and cure ailing accounts.

...

- Professional management available to represent your office to Medicare, Blue Shield, Medical Assistance and other insurance carriers.
- Our service relieves your staff from processing self-pay statements.
- Self-pay bills with individualized messages at your prescribed intervals.
- Secondary commercial insurance claims are automatically rebilled.
- A multitude of statistical reports are available, including complete financial audit trails and management reports.

...

**Call today so we may treat you.**

1•800•969•8382 / 1•301•825•5626

Locations in D.C. and Baltimore to serve you.

**PPBSi**

Physician's Professional Billing Services, Inc.

7215 York Road, Baltimore, Maryland 21212  
or phone (301) 825-5626

Please fill out and return this coupon promptly for more information about the many benefits that Physician's Professional Billing Services, Inc. can offer you.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip Code \_\_\_\_\_ Telephone \_\_\_\_\_

# TOUGH, SMART AND YOURS

medical  
economics

## DON'T YOU WISH THESE DEFENSE LAWYERS WERE YOURS?

This big, multistate firm rarely loses a case. But it's more than luck, or even legal skill, that's behind its enviable record.

By Howard Eisenberg

**S**uccessfully defending a brain-damaged baby case is the courtroom equivalent of pitching a no-hitter. Because the "sympathy factor" can add millions to a jury's award, many insurance carriers would rather settle than fight.

Not so the P-I-E Mutual Insurance Co. of Cleveland, Ohio, and the 1-year-old law firm—Jacobson, Maynard, Tuschman & Kalur—that does all its defense work. In 21 brain-damaged baby cases it has defended for the doctor-owned company, its record is a remarkable 19-1-1, the last a hung jury. In 1988, its over-all scorecard read 33 wins, 5 losses—all malpractice cases.

There's more to those numbers than luck "the even legal skill," adds JMT&K founding partner Aaron Jacobson, who was one of Ohio's leading plaintiffs' lawyers before he, Larry E. Rogers, Herbert S. Bell, M.D., and 70 other Cleveland doctors formed P-I-E in 1975.

"It's the concept behind the firm that makes it work. Physicians specially panels review every lawsuit to decide whether the defendant deviated significantly from the standard of care. If he did, we pay. If he didn't, we defend. Makes no difference whether it's a \$5,000 or a \$5 million case. We label it 'No pay.' That policy has resulted in a lot of cases being dropped. Perhaps more important, it's

discouraged the filing of many other cases. Plaintiffs' attorneys have learned that we're fair negotiators when our doctor's in the wrong, but won't back down when he's right."

That approach pays off. "According to the most recent report I've seen from the General Accounting Office," says Larry Rogers, P-I-E president and CEO, "in 1984, about 55 percent of medical-malpractice claims were closed without payment."

Through 1988, we've closed an average of 78 percent of our cases without a dime changing hands. And it's my understanding that, without including defense costs, St. Paul Fire and Marine Insurance Co.'s 1988 average gross payout for cases closed in Ohio with payment was \$52,500. Our comparable figure was about \$10,000 below

theirs. That's partly why we can sell an ORG specialist in Ohio—an industrial state that ranks among the most litigious—\$1.2 million in coverage for just \$26,400."

The unique marriage of P-I-E and JMT&K has been so successful that the carrier has expanded into five other states: Indiana, Kentucky, Maryland, Missouri, and West Virginia. Where P-I-E goes, there goes JMT&K, with nine branch offices to date. The firm has 60 trial attorneys, and may well be the nation's largest devoted well-nigh exclusively to medical-malpractice defense.

Could the insurer-defender symbiosis, if duplicated by other doctor companies, make a significant contribution to reducing malpractice litigation nationwide? An up-close look at

how JMT&K operates may help to answer that question.

### Every lawyer develops a medical specialty

"Our firm's lawyers read more medical books than law books," says P-I-E Vice President Gerard C. O'genorth, himself a veteran defense attorney. Robert Maynard explains, "New cases are discussed at our weekly staff meeting, so that every lawyer is familiar with every case. But we assign cases to our attorneys according to medical specialty. They're well-versed in their fields, so they don't have to relearn the wheel with each case." Last year, the firm's ORG specialist, attorney Jerome S. Kalur, who had won 16 consecutive brain-damaged baby cases, faced one of his toughest challenges when he defended a GP

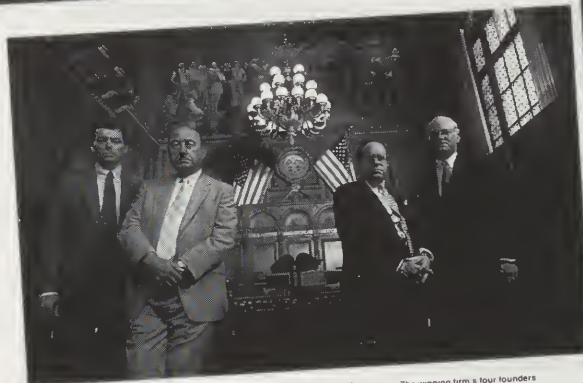
who'd attempted a midforceps delivery that ended in a Cesarean section and a severely brain-injured baby. Recalls Kalur, "I didn't think the doctor had caused the damage, but our position was weakened by the fact that he didn't have midforceps privileges. Based on that departure from the standard of care, our doctor panel voted to settle, and, since the hospital was also involved, a combined sum of \$1.5 million was offered. Plaintiffs turned us down flat."

"I wanted to depose the doctor, who'd been involved in the mother's care during her hospitalization, but the attorney for the plaintiff baby insisted it would violate the mother's physician-patient confidentiality. That privilege would terminate automatically when her medical

The winning firm's four founders at Cleveland's 8th District Court of Appeals (from left): Jerome S. Kalur, Aaron Jacobson, James M. Tuschman, and Robert Maynard.

records were introduced at the trial end of the plaintiff's case. Meanwhile, I was in the no-win position of having to tell the jury, 'It couldn't have been the midforceps,' without offering them another reasonable brain-damage theory."

Fortunately, the plaintiff rested their case on a Friday afternoon, giving JMT&K time for a weekend rally. "Twenty minutes later," says Kalur, "I was in the hospital pathologist's office with an order permitting me to view the mother's placental slides." Microfilm staining had been charted, and Kalur had a hunch that fetal distress had begun long before the fur



**T**hey're seasoned attorneys with an incredible record of success.

Malpractice specialists in every medical specialty.

More than seventy lawyers in eleven offices: they're part of The P-I-E Mutual team ... Jacobson, Maynard, Tuschman & Kalur, a formidable defensive lineup, with an imposing record.

Three-quarters of all claims closed without a penny changing hands.

Ninety percent of the cases that go to trial won.

One of every four doctors will someday face a lawsuit. The P-I-E Mutual helps you face that future without fear. With a claims review committee made up of your peers. And a prepaid law firm that can rally its total resources against any and all claims.

Call us for a reprint of the Medical Economics article. 1-800-228-2335. Tough and smart can soon be yours.



THE P-I-E MUTUAL  
INSURANCE COMPANY

NORTH POINT TOWER  
1001 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114-1149



WINTERICH-NEFF & ASSOCIATES  
7 EAST REDWOOD, SUITE 810  
BALTIMORE, MARYLAND 21202  
301-234-2800



---

# Leishmaniasis: An Undesirable Import

---

Suzanne Holmes Giannini PhD and Joseph W. Burnett MD

---

*From the University of Maryland School of Medicine where Dr. Giannini is a member of the Department of Microbiology and Immunology and Dr. Burnett is a member of the Department of Medicine.*

---

*The impact of leishmaniasis on public health is often underestimated.*

*Prompt diagnosis and appropriate therapy may minimize the development of serious sequelae.*

---

A patient comes to your Maryland office complaining of a painless, non-healing skin nodule or ulcer. Your differential diagnosis would normally include swimming pool granuloma, carcinoma, lymphoma, blastomycosis (if the lesion is on the face), sporotrichosis (if there is more than one lesion), and possibly lupus erythematosus. But what if this patient has been traveling in the tropics or the Middle East, or is an avid camper, bird watcher or safari goer? Then, consider the possibility of exotically acquired cutaneous leishmaniasis.

## The Disease

A Maryland-educated physician, James Homer Wright (AB, The Johns Hopkins University; MD, University of Maryland), is credited with the first detailed description in 1903 of the protozoan parasite causing cutaneous leishmaniasis.<sup>1</sup> The leishmania live exclusively within histiocytes and macrophages, and cause a wide variety of clinical presentations. The most common is a painless, non-healing nodule or skin ulcer, a granulomatous reaction to *Leishmania*. Excision of the leishmanial granuloma or treatment with steroids may worsen the disease. Delay in diagnosis can be a setback.

All species of *Leishmania* can cause skin lesions, which are by far the most common presentation. In addition, certain species can metastasize from the initial lesion to cause more serious diseases: mucocutaneous leishmaniasis with extensive mutilation of the lips and nasopharynx; diffuse cutaneous leishmaniasis involving large areas of skin; or visceral leishmaniasis, a systemic disease characterized by hepatosplenomegaly, fever, and wasting. In immunocompromised hosts, leishmaniasis may be a fatal opportunistic infection.<sup>2</sup> Identifying the infecting species is critical in deciding whether to treat a skin lesion conservatively or aggressively, especially if the lesion seems to be resolving.

## Incidence

Leishmaniasis is endemic in every continent except Australia and Antarctica. The types of leishmaniasis reported in each country are detailed in a 1984 World Health Organization report.<sup>3</sup> Worldwide, an estimated 400,000 new cases of leishmaniasis occur annually, with a prevalence of 12 million.<sup>4</sup> The areas of endemicity and the number of cases seem to be increasing.

In view of the recent transport of hundreds of thousands of Americans to the Middle East as part of the United Nations action in the Persian Gulf, it is important to note that cutaneous leishmaniasis is highly endemic in Iraq, Kuwait, and Saudi Arabia, including a focus near Riyadh, Saudi Arabia.<sup>5</sup> Indeed, one common name for cutaneous leishmaniasis is "Baghdad boil."

In the United States, 259 cases of leishmaniasis were reported to the Centers for Disease Control (CDC) in Atlanta from 1976 to 1985.<sup>6</sup> Two cases were contracted in an endemic focus in Texas, one was an accidental laboratory infection, and the rest were imported into the United States. Since 1981, cases in the US military are no longer included in the CDC figures. The CDC figures probably underestimate the true number of infections because they are based entirely on physician-initiated requests for the antimonial Pentostam, the approved chemotherapy.

## People Likely to be Infected

Most imported cases occurred in former residents of endemic areas, or in visitors to these areas engaged in military exercises, biological field studies, jungle touring, or missionary work. More than half of the cases were acquired in Central and South America, about one-third in the Middle East, and the remainder in Asia, Africa, and the Mediterranean area.<sup>6</sup>

## Recommendations for Diagnosis and Treatment

A biopsy should be taken from the raised, non-ulcerated border of the lesion where the leishmania replicate. The biopsy specimen should be divided aseptically. Half the specimen should be formalin fixed for pathological examination; the remainder should be cultured at 22° C to obtain the organisms or be placed in sterile saline and refrigerated at 4° C for immediate transport. It is important to identify the species because all of them can cause similar cutaneous

lesions. The Parasitic Disease Branch of the CDC in Atlanta at 404-488-4437 will provide culture medium, consult on pathology, or review slides.

Pentostam, the drug of choice in the United States, is available only from the CDC. From 1976 to 1985, more than 85 percent of patients with cutaneous, mucocutaneous, or visceral leishmaniasis responded to Pentostam therapy of 10 to 20 mg/kg/day for ten to thirty days. Drug failures were associated with increasing age, immunosuppression, and infection in regions endemic for the species *L. braziliensis*. Pentostam is toxic, and side effects were not uncommon.<sup>6</sup>

Amphotericin B is used as a second-line drug. Though not approved for use in the United States, ketoconazole has been used to treat cutaneous leishmaniasis, with variable results. Conservative treatment with topical antibiotics to minimize secondary infections may be appropriate for lesions that are healing, if it can be established that they are caused by non-metastasizing species.

The impact of leishmaniasis on public health is often underestimated. Prompt diagnosis and appropriate therapy may minimize the chances of serious sequelae developing.

## References

1. Wright JH. Protozoa in a case of tropical ulcer ("Delhi sore"). *Journal of Medical Research* 1903; 10:472-82.
2. Fernandez-Guerrero ML, Aguado JM, Buzon L, Barros C, Montalban C, Martin T, Bouza E. Visceral leishmaniasis in immunocompromised hosts. *Am J Med* 1987; 83:1098-1102.
3. World Health Organization. The Leishmaniasis: Report of a WHO Expert Committee. WHO Technical Report Series 701. 1984.
4. Modabber F. The leishmaniasis. In: Maurice J, Pearce AM, eds. *Tropical Disease Research: A Global Partnership*. Geneva: World Health Organization. 1987; 99-112.
5. Sukkar F. Leishmaniasis in the Middle East. In Chang K-P, Bray RS, eds. *Leishmaniasis*. New York: Elsevier Science Publishers. 1985; 393-413.
6. Waskin H, Harpaz R, Navin TR. Leishmaniasis in the United States, 1976 to 1985. Thirty-sixth Annual Meeting of the American Society of Tropical Medicine and Hygiene, Abstract 372. 1987.

## Acknowledgments

Drs. Ralph Brian (Centers for Disease Control, Atlanta, GA), Edmond Goidl (University of Maryland, Baltimore, MD), and Hedy Waskin (Duke University, Chapel Hill, NC) provided much useful information and helpful discussions. ■



# Roget: A Versatile Physician of the Nineteenth Century

---

Joseph M. Miller MD

---

*Dr. Miller is a retired surgeon.*

---

*Peter Mark Roget, best known as the compiler of the *Thesaurus*, was also a physician, inventor, writer, and scientist.*

---

The title, *Thesaurus*, is ingrained in the English language and, although the book is widely known, its versatile author and his multitude of accomplishments are not so well-recognized. When Barrie described Captain Hook in *Peter Pan*, he wrote "The man is not wholly evil--he has a *Thesaurus* in his cabin." Hook was described as sinister, polite, and elegant in diction. Then, as now, the *Thesaurus* was a possession of one who spoke and wrote in a literate manner.

Peter Mark Roget (1779-1869), the compiler of the *Thesaurus*, graduated from Edinburgh in 1798 as a doctor of medicine. During the next six years in Manchester, he not only practiced medicine but gave a course of lectures, mostly in chemistry, which may have contributed to the formation of the Manchester Medical School.<sup>1</sup>

In 1809, Roget moved to London and received his license from the Royal College of Physicians. He aided in establishing the Northern Dispensary where he worked without compensation for eighteen years. His days were more than complete as he successively became a member of the Royal Geological Society, the Royal Astronomical Society, the University of London, the Royal Geographical Society, and the Royal Entomological Society. He also found time during his busy medical practice and teaching career to write at length for the *Encyclopedia Britannica*.<sup>1</sup> He was one of the prime examples of the nineteenth century man of letters.

Fascinated by mathematics, it was natural that he was elected to the Royal Society for inventing a log-log slide rule.<sup>2</sup> His slide rule was used well into the twentieth century when the hand-held microchip computer was developed. Almost 200 years had elapsed between the time of Napier and Briggs and their logarithms and Roget's new slide rule.

Four years after his slide rule invention, he published a learned exposition on the kaleidoscope<sup>3</sup> which had recently been patented. This instrument, familiar now to many children, produced a series of images from two plane mirrors placed at a certain inclination in a tube. Roget prepared an interesting and detailed discussion of the physical properties involved in the construction of triangular kaleidoscopes and recounted the material advantages of the polygonal varieties. Displaying a sound knowledge of

optics and geometry, he further suggested that metallic reflectors would produce more light than glass mirrors and that the illumination might be increased by giving the instrument the form of a truncated pyramid with the aperture for the eye at the smaller end.

An even greater scientific contribution was his report on a serendipitous observation of an event whose interpretation became the basis of the modern motion picture. He recognized the occurrence of a curious optical deception when he chanced to view a rolling carriage wheel through the intervals of a vertical venetian window blind; the presence of horizontal bars did not change the observed illusion. He concluded that the phenomenon occurred because a retinal impression remains for a short period after the light source is removed.<sup>4</sup> If human vision were perfect, the illusion of the moving picture would be impossible. (Early motion pictures were projected at a rate of sixteen frames per second but this speed has been increased to twenty-four per second.) In 1923, the movie industry celebrated the centennial of his remarkable discovery.

Roget's observation was exploited in numerous ways in the manufacture of optical devices which amused children and adults and gave further proof to the underlying principle. The thaumatrope, phenakistoscope, and zoetrope featured the merging of pictures to create the illusion of movement. Subsequently, in 1839, Daguerre reported the earliest known method of photography using a plate sensitized with iodine, developed by mercury vapor, and fixed by a solution of hyposulphite. The kinetoscope emerged from the Edison laboratories in 1872 and then Eastman Kodak began the manufacture of photographic film in 1889. A tremendous industry based on the primary observation of Roget arose later.

Additionally, the function of the stroboscope is based on the same ability of the retina to retain an image for an appreciable time. Use of the instrument permits the study of rapid rotary or reciprocating motion. An object seen at intervals equal to the time of revolution will appear to be stationary. If the speed is slightly greater or slightly less, the image will move forward or backward very slowly. When flashes of light are synchronized with rotation, the eye perceives the machine as standing still. Unwanted motion is thus easily discoverable. The applications in industry are many.

Although Roget retired from the practice of medicine in 1840, he never stopped working. In 1849, when he was seventy, he re-started work on the *Thesaurus* in which he had had a longtime interest. Roget read Latin, German, and Italian well and was more than competent in French, so he was well equipped to further his effort.

In compiling what will remain as his greatest work and perpetual remembrance, Roget only continued a lifelong pattern of organization and was able to bring order into a previously untouched area. He did for words and their meanings what Linnaeus did for botany and zoology and Mendeleev did for chemistry. By careful observation and diligence, each investigator brought a systemic order into his respective discipline.

As early as 1805, Roget began compiling a catalogue of words and phrases for his own convenience. He knew about the *Amata-Kosha* produced by Asmarha Sinha, a Sanskrit grammarian and poet of the fourth century AD, and was also aware of a *Pasgraphie* which had been published in Paris in 1797.

The avocation changed to a full-time position between 1849 and 1852. In 1852, Roget published his book, called a *Thesaurus* or treasury of words, which was conceived and effected with thoughtfulness and precision.

The book was immensely successful, with contemporary words and phrases included in subsequent editions. A second edition appeared in 1852 and a third in 1855. At the time of his death in 1869, twenty-eight editions and printings had been released to the public. His son and grandson expanded the work for another edition which appeared in 1879. The Crowell editions started in 1886 and have continued to the present time. The thirty-fourth issue, titled, *Roget's International Thesaurus*, is in its fourth edition and contains 250,000 words and phrases, many of late appearance.<sup>5</sup>

The book is found in all libraries, both public and private. The writer and the crossword puzzle doer have often found aid in its pages. The mark of success is imitation and a number of similar volumes have entered the book world.

Roget was a good physician and made numerous contributions in the field of scientific investigation. A recounting of his activities stuns the reader by its breadth and depth. He was a careful observer, methodical worker, and clear writer.

## References

1. Emblen DI. Peter Mark Roget: The Word and the Man. New York: Thomas Y. Crowell Company. 1970; 368.
2. Roget PM. Description of a new instrument for performing mechanically the involution and the evolution of numbers. Phil Trans 1815; 105:9-28.
3. Roget PM. On the kaleidoscope. Ann Phil 1818; XI:375-8.
4. Roget PM. Explanation of an optical deception in the appearance of the spokes of a wheel seen through vertical apertures. Phil Trans 1825; 115:131-40.
5. Chapman RL. Roget's International Thesaurus. Fourth Edition. New York: Harper and Row Publishers. 1977; 1317



# We Need A Doctor In The House

When the Maryland General Assembly convenes in Annapolis for its 1992 session, the Medical and Chirurgical Faculty will be there. Since 1964, Med Chi has staffed the first aid facility operated during the 90-day legislative session. Come join us at the state capitol building, see the laws being made first hand. One doctor a day is all that is needed to care for the public, the legislators, and their staffs. Take advantage of the opportunity to donate something priceless, your time.

Please detach the postcard located at the top of this page, fill it out and mail it. A confirmation card will be sent to you explaining the details. You will be carrying on a tradition established by the medical community for the people of Maryland.

## Doctor of the Day 1992



Note: All Monday dates are evening sessions, beginning at 4:00 p.m. and ending at 9:00 p.m. For more information, call Bernadette LaRue at Med Chi's Legal Department, 301-539-0872 or call toll free in Md. at 1-800-492-1056.

Your time can make a difference.

### American Academy of Ophthalmology: Elimination of Preventable Blindness from Diabetes by the Year 2000

In no field of medicine is continuing medical education of physicians more critical than in the management of diabetes. Twelve million Americans have diabetes mellitus, and the disease knows no medical specialty boundaries. In addition to being a major cause of morbidity from multi-system complications such as renal failure, neuropathy, and cardiovascular disease, diabetes is the leading cause of blindness among working-age Americans. It accounts for at least 12 percent of new cases of blindness every year in the United States. Diabetic retinopathy is often asymptomatic at its most treatable stage, emphasizing the importance of early diagnosis of this retinal complication. New information about diabetes emerges almost monthly as published in some specialty journal, making it mandatory for us to find better ways to keep up with advances in this field -- the stakes are simply too high to do otherwise.

In response to the increasing importance of the overall problem of diabetes and diabetic retinopathy, and the availability of improved treatment regimens defined by published clinical trial results, the American Academy of Ophthalmology (AAO) has embarked on a long-term education project designed to more rapidly translate research findings to medical benefits for the American public.<sup>1</sup> The new project -- "Elimination of Preventable Blindness from Diabetes by the Year 2000" -- or "Diabetes 2000" -- was announced at the AAO's 1989 Annual Meeting.

#### Facts About Diabetic Retinopathy

The majority of diabetic patients have non-insulin-dependent diabetes mellitus (NIDDM, Type II). Usually diagnosed after age forty, Type II diabetic patients may or may not be treated with insulin. Fewer patients have insulin-dependent diabetes mellitus (IDDM, Type I), which is usually diagnosed before age thirty. Type I diabetics experience more frequent and severe ocular complications. After five years, 23 percent of Type I diabetic patients have retinopathy; after ten years, almost 60 percent have retinopathy; and after fifteen years, 80 percent have it. Prolifera-

tive diabetic retinopathy (PDR) -- the most threatening form of retinopathy -- is present in 25 percent of Type I patients after fifteen years and often remains asymptomatic well beyond the optimal stage for treatment.

An estimated 700,000 Americans have proliferative diabetic retinopathy and 500,000 have macular edema. The annual projected incidence of new cases of PDR and macular edema is 65,000 and 75,000, respectively. About 8,000 new cases of blindness a year in the United States are caused by complications from diabetes.

#### What Can Be Done

"Diabetes 2000" provides the means to close the gap between advances in research and changes in treatment patterns. While most physicians are aware of diabetic retinopathy, the AAO's goal now is to focus attention on the importance of early diagnosis and timely treatment of diabetic retinopathy based on the important advances of the last five to ten years. For example, we now know that timely laser photocoagulation surgery can reduce the risk of visual loss from proliferative diabetic retinopathy by at least 50 percent. We know that timely laser photocoagulation surgery of diabetic macular edema can reduce the risk of moderate visual loss by 50 percent. We know that vitrectomy surgery can restore useful vision to some diabetic patients who have advanced diabetic retinopathy.

#### Effective Partnerships are Needed

As the working title implies, "Diabetes 2000" will be a long-term project aimed at a specific disease: diabetic retinopathy and its complications. Several phases are anticipated. Providing the latest research findings to ophthalmologists and other physicians who care for those patients is the first priority, followed by patient and public information. Initially, new advances and treatment guidelines for the medical and surgical treatment of diabetic eye disease will be emphasized through continuing education of

### Commentary: "Diabetes 2000"

In this issue of the *Maryland Medical Journal*, the Maryland Society of Eye Physicians and Surgeons and the American Academy of Ophthalmology announce the implementation of their ambitious project, "Diabetes 2000," aimed at eliminating preventable blindness from diabetes by the year 2000. They note 8,000 new cases of blindness a year in the United States from diabetic retinopathy, despite recent advances in treatment. The program will be phased in, with educational programs for ophthalmologists and others active in the management of diabetic patients, followed by additional educational projects directed toward patients and the public.

Maryland physicians have played important roles in ad-

vances in diabetic retinopathy treatment. Dr. Arnall Patz, Chairperson of the "Diabetes 2000" Project and Past Chairman of the Wilmer Ophthalmological Institute, was a pioneer in the development of laser delivery systems for the eye, and did early investigative work on treatment of retinal vascular abnormalities. Ophthalmologists at Johns Hopkins and the University of Maryland served as coordinators and principal investigators in national collaborative studies which determined the efficacy and indications for treatment of proliferative diabetic retinopathy and diabetic macular edema. Dr. Alfred Sommer, Dean of The Johns Hopkins School of Hygiene and Public Health (assisted by Dr. Andrew Schachat,



ophthalmologists, other physicians, allied health professionals, residents, medical students, and specialists in diabetes-related education. In later phases, educational programs for diabetic patients and the public will be developed.

Ultimately, improved eye care of diabetic patients is expected as a result of closer collaboration between the physician primarily responsible for the care of the patient's systemic illness, the patient, and the ophthalmologist. Since diabetic patients can be asymptomatic despite significant progression of diabetic retinopathy, the importance of a renewed and improved partnership between the ophthalmologist and the patient's primary physician is critical.

Because of the ambitious goal and long timeframe, many other medical organizations and public groups are involved in "Diabetes 2000." Representatives from various medical specialties, government agencies, and other organizations devoted to problems of the diabetic patient have been invited to participate. Since diabetes is a complex, multi-system disease, whose overall management is the responsibility of physicians other than ophthalmologists, "Diabetes 2000" will stress involvement of other physicians and medical specialty organizations in the planning and implementation of the project. The importance of finding ways to develop effective partnerships among the patient's primary physician, the ophthalmologist, and the patient in the management of diabetic eye disease is a major goal. Another important aspect of the project is the identification and promotion of existing diabetes eye health programs around the country, such as the Centers for Disease Control (CDC) Diabetes Translation Project. The AAO will encourage ophthalmologists to participate in national, regional, and local programs that are already in operation, as sponsored by such organizations as the American Diabetes Association, the Juvenile Diabetes Foundation, Lions Clubs, and others.

### Maryland Ophthalmologists are Participating

Educational materials are being developed and demonstration projects are underway in some states to encourage ophthalmologists and other physicians to participate in continuing educa-

tion programs concerned with the overall management of diabetic retinopathy. A Preferred Practice Pattern on diabetic retinopathy is available through the offices of the American Academy of Ophthalmology (415-561-8500).<sup>2</sup> This document provides the latest information concerning the management of diabetic retinopathy. The Maryland Society of Eye Physicians and Surgeons is actively involved in this national initiative. Ophthalmologists in Maryland are eager to help develop the necessary educational and service programs that will achieve this goal.

"Diabetes 2000" will parallel a major diabetic retinopathy public information campaign recently announced by the National Eye Institute (NEI). The NEI's National Eye Health Education Program (NEHEP), which targets both diabetic retinopathy and glaucoma, is fashioned along the lines of earlier federal initiatives against smoking and high blood pressure.

By continuously updating our medical knowledge and skills related to this multi-system disorder, and by forging partnerships between physicians in the effective and efficient management of diabetic patients, we have a unique and important opportunity -- we can reduce preventable blindness from diabetes by the year 2000.

### References

1. Kupfer C. The challenge of transferring research results into patient care. *Ophthalmology* 1989; 96:737-8.
2. Preferred Practice Pattern: Diabetic Retinopathy. American Academy of Ophthalmology 1989.

#### ROBERT A. LISS MD

President, Maryland Society of Eye Physicians and Surgeons (1990)

#### RONALD E. SMITH MD

Secretary for Continuing Education,  
American Academy of Ophthalmology  
"Diabetes 2000" National Project Director

#### ARNALL PATZ MD

Past President, American Academy of Ophthalmology,  
"Diabetes 2000" National Chairperson

Co-Director of the Retinal Vascular Service at Johns Hopkins) chaired the American Academy of Ophthalmology Quality of Care Committee responsible for development of the landmark *Preferred Practice Patterns*, including one on the management of diabetic retinopathy. These documents have been widely disseminated and praised, and deserve the attention of all ophthalmologists and other physicians treating diabetic patients.

Proven advances in the treatment of diabetic retinopathy make it frustrating for ophthalmologists to initially see patients only after they have suffered devastating complications and visual loss. Available proven treatment techniques

make it mandatory that individuals managing diabetic patients be educated about the importance of early detection of diabetic retinopathy. Maryland ophthalmologists will take part in instructing other physicians in early detection of diabetic retinopathy and timely referral for ophthalmological evaluation.

Medicine has the tools to prevent diabetic blindness. The Maryland Society of Eye Physicians and Surgeons and the American Academy of Ophthalmology should be congratulated for implementing the "Diabetes 2000" project, with its ambitious goal of eliminating needless diabetic blindness.

#### ALLAN D. JENSEN MD

Baltimore

### Acoustic Neuroma

Acoustic neuromas represent 60 to 90 percent of all cerebellopontine angle masses and 8 to 10 percent of all intracranial tumors.<sup>1</sup> Other names frequently applied to this tumor include acoustic schwannoma and acoustic neurilemmoma. Most arise from the superior vestibular branch of the eighth cranial nerve. They generally produce hearing loss, tinnitus, and difficulty with balance. Incidence peaks in individuals forty to sixty years of age. Bilateral acoustic neuromas are typically found in type 2 neurofibromatosis.<sup>2</sup>

#### Clinical Features

The symptoms resulting from an acoustic neuroma are secondary to pressure on the acoustic nerve. These symptoms are usually slowly progressive and include sensorineural hearing loss, tinnitus, and loss of balance. It is unusual for a patient to present with only tinnitus. Clinical assessment should include a history and physical, audiogram, brainstem evoked response, and magnetic resonance imaging (MRI). The most sensitive non-imaging study is brainstem electrical response audiometry which is reportedly 89 percent accurate.<sup>1</sup>

Treatment is primarily surgical removal. To preserve maximum hearing, the lesion should be removed when it is at the smallest possible size. Three surgical approaches are commonly used: translabyrinthine, suboccipital, and middle cranial fossa. The last two approaches allow preservation of hearing.

#### Pathology

Acoustic neuromas are benign, slow-growing, encapsulated tumors composed of Antoni type A and type B tissue. Type A tissue is structurally compact while type B tissue has a loose consistency and shows more frequent cyst formation. These tumor cysts are frequently large enough to be seen with MRI or computed tomography (CT). Associated arachnoid cysts can also be seen. Acoustic neuromas range in size from several millimeters to greater than 8 centimeters.

#### Radiology

MRI has replaced CT as the imaging study of choice in assessing acoustic neuromas. For detection of small lesions, particularly those that are intracanalicular in location, gadolinium-enhanced MRI has replaced air contrast CT cisternography as the study of choice. Typical findings on MRI or CT are a rounded mass in the cerebellopontine angle cistern which is centered at the acoustic porus. The lesion frequently extends into the internal acoustic canal (IAC). Flaring of the porus is common. A small percentage of

lesions are completely intracanalicular. Indirect findings include widening of the ipsilateral middle cerebellar peduncle, and compression and displacement of the fourth ventricle.

On MRI, the lesion is usually intermediate in signal on T1 weighted images and high in signal on T2 weighted images. Marked, relatively homogeneous gadolinium enhancement is common and non-enhancing regions may reflect cyst formation (Figures 1 and 2). Larger lesions tend to be less homogeneous (Figures 3 and 4).

The differential diagnosis of cerebellopontine angle lesions includes meningioma, epidermoid, arachnoid cyst, nonacoustic schwannoma, lipoma, and vascular lesions. These are usually readily differentiated by MRI.

#### References

1. Som PM, Bergeron RT, eds. Head and Neck Imaging. Second Edition. New York: Mosby-Year Book, Inc. 1991; 1046-55.
2. Martuza RL, Eldridge R. Neurofibromatosis 2 (bilateral acoustic neurofibromatosis). *N Engl J Med* 1988; 318:684.

EDGARD. FEARNOW MD, Department Editor, is a Radiologist with Drs. Schultze, Snider and Associates PA in Baltimore, MD ■

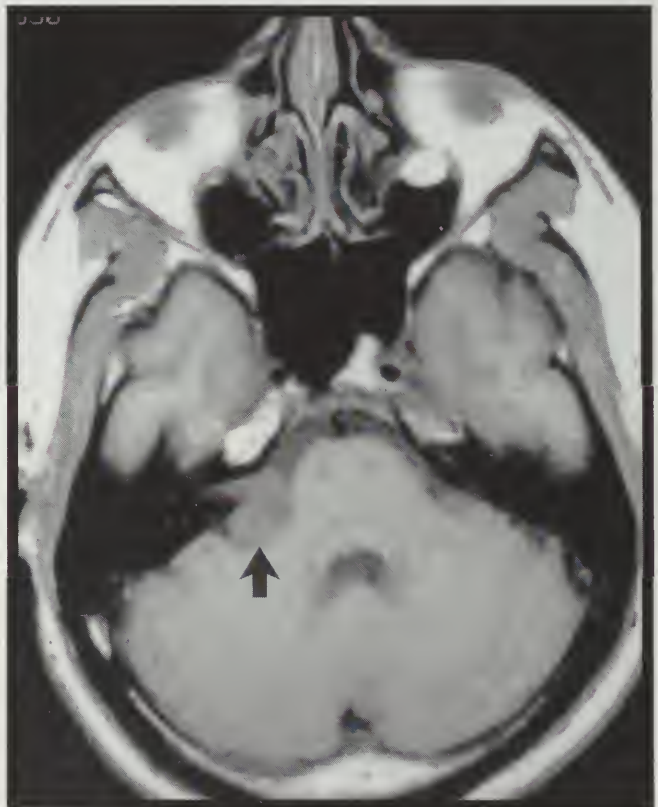
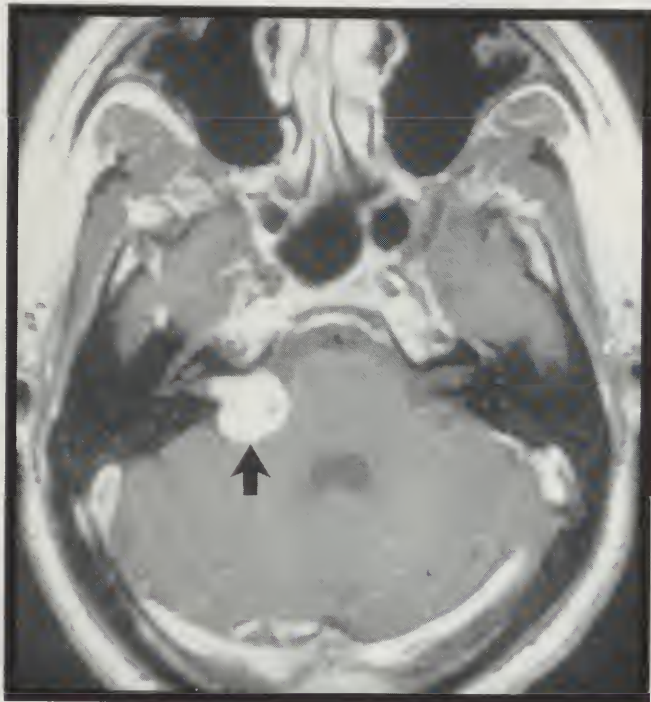


Figure 1. Nonenhanced T1 weighted MRI showing small intracanalicular and cerebellopontine angle acoustic neuroma (arrow).





**Figure 2.** Gadolinium enhanced T1 weighted MRI showing marked enhancement of acoustic neuroma (arrow).



**Figure 3.** Gadolinium enhanced MRI of a large acoustic neuroma showing marked enhancement of solid component of mass (arrow) with large hypointense cystic areas.

## Imaging Case of the Month

Imaging Case of the Month is a new department of the *Maryland Medical Journal* which will be featured on a regular basis. Coordinated by the Maryland Radiological Society, the cases will review a broad range of diseases and pathological processes of interest to a wide range of specialists. Physicians interested in submitting cases for publication consideration should contact the Department Editor.

Edgar C. Fearnow MD  
c/o Drs. Schultze, Snider & Assoc. PA  
Suite 100, 21 Crossroads Dr.  
Owings Mills, MD 21117  
301-363-6677



**Figure 4.** CT scan (bone window) of patient in figure 3 showing marked expansion and erosion of porus acusticus and IAC (arrow).

# Make an Impact with MMPAC

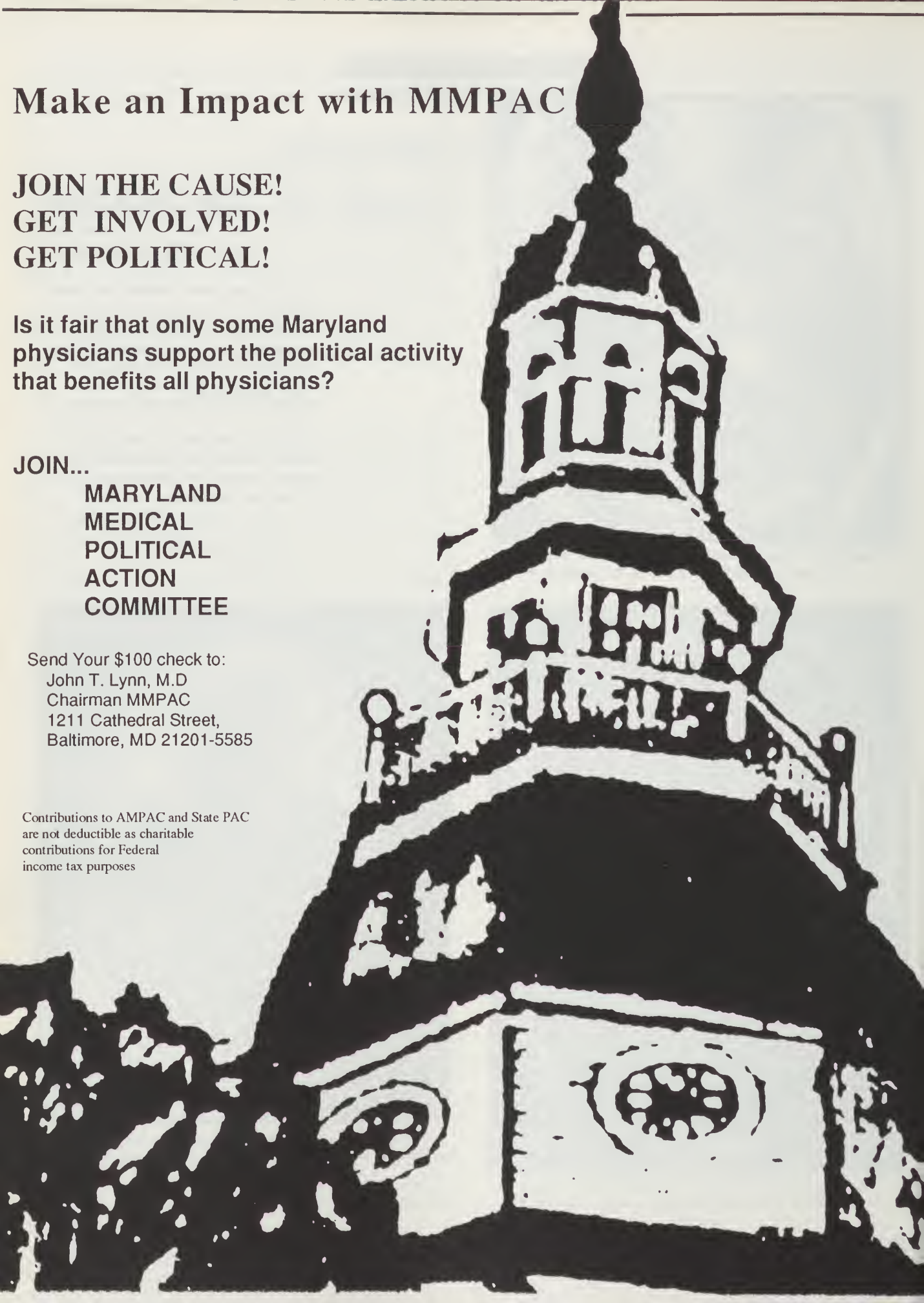
**JOIN THE CAUSE!  
GET INVOLVED!  
GET POLITICAL!**

**Is it fair that only some Maryland  
physicians support the political activity  
that benefits all physicians?**

**JOIN...  
MARYLAND  
MEDICAL  
POLITICAL  
ACTION  
COMMITTEE**

Send Your \$100 check to:  
John T. Lynn, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201-5585

Contributions to AMPAC and State PAC  
are not deductible as charitable  
contributions for Federal  
income tax purposes





## Board of Physician Quality Assurance Actions

**In the Matter of  
Mohammed H. Amirgholi MD  
Before the  
Maryland Board of  
Physician Quality Assurance**

### **Amended Final Decision**

**B**y Final Decision dated February 5, 1990, the Board of Physician Quality Assurance (the Board) voted to revoke the license of Mohammed H. Amirgholi MD (the Respondent). The Final Decision contained no time period or conditions for petitioning the Board for reinstatement of his license.

COMAR 10.31.01.12.C states:

When an order of revocation or suspension states a time for reinstatement of a license, the accused shall make written request for reinstatement to the Commission at the expiration of the stated time. When a time period is not stated on the order, a petition for reinstatement may not be entertained before the expiration of one year after the date of the Order.

The Board's Final Decision stated no time period at which the Board would consider a petition for reinstatement. Therefore, Respondent cannot petition for reinstatement of his license prior to February 6, 1991. However, since the time that Respondent's license was revoked, Respondent has sought guidance from the Board as to what he could do in order for the Board to consider reinstating his license. Therefore, the Board, through its Settlement Conference, met with Respondent and his attorney on Wednesday, December 5, 1990. The Settlement Conference made recommendations to the Board as to what Respondent must accomplish in order for the Board to consider reinstating his license when Respondent is permitted to petition the Board.

At its meeting on December 12, 1990, the Board considered the Settlement Conference's recommendation and voted to amend its Final Decision as follows.

### **Findings of Fact**

1. The Findings of Fact of the Board's Final Decision dated February 5, 1990 are incorporated by reference.
2. Respondent's license was revoked on February 5, 1990. Since on or about the spring of 1990, Respondent has sought guidance from the Board as to what he could accomplish in order that the Board would consider reinstating his license.
3. Respondent took a BioEthics Course in June, the 3rd to the 9th, 1990, from Georgetown University for twenty-three Category 1 continuing medical education credits.
4. Respondent submitted ninety-five Category 1 continuing medical education credits for grand rounds and regularly

scheduled medical conferences for the academic year 1989-1990 from Johns Hopkins Hospital.

5. Respondent is taking courses in otolaryngology from The Johns Hopkins Hospital's Department of Otolaryngology.
6. Respondent submitted a statement from Washington Free Clinic, Washington, DC, that "he has been of immense help to (the Clinic) in fulfilling our mission of providing high quality health care to uninsured Washingtonians who lack health insurance." (Letter dated November 2, 1990, from the Director of the Washington Free Clinic.)
7. Respondent submitted a letter from his therapist (dated November 14, 1990) which indicated that Respondent is making progress and has been "regular, serious and thoughtful" and "is strongly committed to working again and recovering a productive stature. He is determined to contribute to this society in a move to heal hurts he has caused."

### **Conclusions of Law**

The Board incorporates by reference the conclusions of law contained in its Final Decision of February 5, 1990 and further concludes that Respondent's license is REVOKED and Respondent cannot petition the Board for reinstatement of his license until February 6, 1991, being governed by HO §14-509.

### **Order**

By a majority vote of the full authorized membership of the Board considering this matter it is hereby this 26th day of December 1990

ORDERED that the Board will not consider Respondent's petition for reinstatement of his license until such time as Respondent submits evidence of the following:

1. Respondent has continued in therapy on a regular basis with his therapist. Respondent's therapist must submit a report to the Board indicating the progress Respondent is making and the number of times Respondent sees his therapist from December 5, 1990 to the time of the Petition for Reinstatement. Respondent must sign a release permitting the therapist to report to the Board;
2. Respondent has completed all continuing education requirements for three years proceeding the time of the petition for reinstatement, such requirements being fifty credits for each year;
3. Respondent has continued working in the Washington Free Clinic and the Director has submitted a report indicating the nature of Respondent's duties and the time Respondent gives weekly to the Clinic from December 5, 1990 to the time of the Petition for Reinstatement; and
4. Respondent has been evaluated by Edward J. Kowalewski MD, Professor Emeritus, School of Medicine,

University of Maryland at Baltimore, Department of Family Medicine (the Evaluator). The evaluation would cover an overview of Respondent's practice and focus upon Respondent's knowledge and practice of otolaryngology. Respondent would bear the expense of this evaluation and must sign releases permitting the Board to give the Evaluator information to assist in the evaluation, permitting the Board to inform the Evaluator of the final resolution of this matter, and permitting the Evaluator to forward his report to the Board. Respondent must comply with all reasonable requests of the evaluator; and be it further

ORDERED that in the event that the Evaluator's report reveals no deficiencies, the Board would stay the revocation of Respondent's license subject to the following conditions of probation:

1. Respondent would be permitted to return to a practice setting approved by the Settlement Conference and practice under supervision. Respondent would sign a release permitting the Board to receive monthly reports from Respondent's supervisor;
2. Respondent has taken and passed the first available Special Purpose Examination (SPEX) with a score of 75. Respondent shall bear the expense of taking this examination; and be it further

ORDERED that in the event that Respondent fails the SPEX, the stay on the revocation of Respondent's license would be lifted; and be it further

ORDERED that in the event that Respondent passes the SPEX examination and his supervisor's reports are satisfactory, Respondent would be permitted to practice without supervision in a practice setting approved by the Board or the Settlement Conference subject to the following conditions:

1. For three years Respondent would be subject to practice reviews, the expense of which would be his responsibility. In the event that the practice review indicated that Respondent was a danger to himself or the public, the stay of revocation would be lifted without prior notice and an opportunity to be heard provided that Respondent was given a hearing within thirty days of requesting same. In such a hearing, the burden of proof would be preponderance of the evidence; and
2. Respondent must take twenty-five additional Category 1 hours of continuing education approved by the Board or the Settlement Conference; and be it further

ORDERED that in the event that the Evaluator's report reveals deficiencies in Respondent's medical practice, Respondent must remediate the enumerated deficiencies and follow any reasonable recommendations given by the Evaluator prior to petitioning the Board for reinstatement of his license; and be it further

ORDERED that in the event that the Board stays the revocation of Respondent's license and thus reinstates

Respondent's license, the Board can impose any additional reasonable conditions of probation; and be it further

ORDERED that this Order is considered a public document pursuant to *Md. State Gov't Code Ann.*, §10-611 *et seq.*

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

### Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of eight pages.

1. By signing this Consent, I hereby submit to this Order and its conditions.
2. I acknowledge the validity of this Order and the legal authority of the Board of Physician Quality Assurance to issue and enforce this Order.
3. I acknowledge that by consent to this Order, I am waiving my right to challenge in court the legal authority of the Board of Physician Quality Assurance to take action against my license to practice medicine in the State of Maryland.

I, Mohammed H. Amirgholi MD, have read this Consent Order and have carefully reviewed each and every part with my attorney, Kenneth Michael Robinson, Esquire. I understand it and voluntarily agree to it.

I sign and consent to this Order after having an opportunity to consult with counsel and with full understanding of the meaning and the terms of the Order.

MOHAMMED H. AMIRGHIOLI MD



In the Matter of  
Sarkis Sarkissian MD  
Before the  
Maryland Board of  
Physician Quality Assurance

### Consent Order

On October 24, 1990, the State Board of Physician Quality Assurance (the Board), acting pursuant to its authority under *Md. State Gov't Code Ann.* §10-405, held a hearing on a proposed Summary Suspension of the license of Sarkis Sarkissian MD (the Respondent) to practice medicine in the State of Maryland.

The Board considered the peer review report of the Peer Review Management Committee (PRMC) and documents submitted to the Board by the assigned Administrative Prosecutor during its hearing on October 24, 1990. Also



heard from were the Respondent, the Respondent's counsel, and the assigned Administrative Prosecutor.

At the conclusion of the October 24, 1990 hearing, the Board indicated that it would permit the Respondent, the assigned Administrative Prosecutor, and the Board to sign a Consent Agreement in lieu of the proposed Summary Suspension.

On October 24, 1990, the Board, the Respondent, and the assigned Administrative Prosecutor all executed a six-page document known as the Consent Agreement. The Consent Agreement limited the nature of the Respondent's medical practice during the pendency of charges to be brought against the Respondent. The Consent Agreement prohibited the Respondent from conducting any hysterectomies pending the outcome of the charges against the Respondent. The full text of the October 24, 1990 Consent Agreement is attached to this Consent Order and incorporated herein as Exhibit A.

On October 16, 1990, the Board, pursuant to *Md. State Gov't Code Ann* §10-405, voted to summarily suspend the Respondent's license. In addition, on October 16, 1990, the Board voted to charge the Respondent under *Md. Health Occ. Code Ann.* §14-404(a)(3), (4), and (22) (1990 Cum. Supp.). Consequently, on November 9, 1990, charges, were issued in accordance with the Board's vote.

The pertinent provisions of §14-404(a) provide:

Subject to the hearing provisions of §14-405 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:

- (3) Is guilty of immoral or unprofessional conduct in the practice of medicine;
- (4) Is professionally, physically, or mentally incompetent;
- (22) Fails to meet the appropriate standards as determined by appropriate peer review for the delivery of quality medical and surgical care performed in an outpatient surgical facility, office, hospital, or any other location in this State.

On January 9, 1991, a settlement conference was held regarding resolving the outstanding charges. At the settlement conference, a proposal was made for the resolution of this matter. The proposed resolution of this matter was presented to the Board at its meeting on Wednesday, January 23, 1991. On an affirmative vote of a majority of its full authorized membership, the Board decided to enter into the following Consent Order.

### Findings of Fact

1. The Respondent has been licensed to practice medicine in the State of Maryland since 1983.
2. The Respondent has been practicing medicine in St. Mary's County, Maryland since 1987.
3. The Respondent maintains a private office for the practice of medicine at 104 Scarlet Oak, California, St. Mary's County, Maryland 20619.
4. In June of 1987, Patient N<sup>1</sup> came under the care of the

Respondent for treatment in the area of her groin. In August of 1987, Patient N was admitted to Calvert Memorial Hospital where the Respondent performed a total abdominal hysterectomy upon Patient N.

5. In January of 1989, Patient N filed a Health Claims Arbitration Claim against the Respondent alleging, among other complaints, that the Respondent deviated from the generally accepted standards of medical care by negligently and recklessly performing an unnecessary total abdominal hysterectomy and bilateral salpingo-oophorectomy on her normal organ structure.
6. Patient N's filing of a Health Claims Arbitration action against the Respondent caused the Board to initially call for a peer review of the single case filed by Patient N. As a result of the peer review of Patient N's file, the Board subsequently ordered a peer review of the then twenty most recent hysterectomy patients of the Respondent.
7. Two peer reviewers each reviewed ten different recent hysterectomy cases of the Respondent. The two peer reviewers each separately concluded that numerous hysterectomies conducted by the Respondent were either questionable or unjustified surgeries.
8. The Respondent was the treating physician and the surgeon who conducted the hysterectomies on Patients A through N as listed in the Charging Document dated November 9, 1990.
9. The Respondent's care and treatment of Patients A through N failed to meet the appropriate standards of care for the delivery of quality medical and surgical care. (Patients A through N range in age from twenty-six through seventy-three years old.)
10. The appropriate standard of care requires that when treating patients with complaints of vaginal bleeding and/or groin pain, the gynecologist determine whether long-term hormone management can be utilized to control the patient's presenting condition(s). The appropriate standard of care requires that hormone management be considered in conjunction with proper diagnostic testing in determining whether a hysterectomy is the appropriate treatment. The Respondent failed to meet the appropriate standard of care in his treatment of seven (A, D, F, G, H, I, and J) patients in that he failed to use alternate methods of treatment prior to performing hysterectomies on them. In particular, the appropriate standard of care required attempts (or in some cases, longer attempts) at hormonal regulation or repeat dilatation and curettage (D&C) procedures. These patients range in age from twenty-six years to forty-seven years old.
11. The appropriate standard of care requires that the treating gynecologist know when a patient's diagnosis requires surgical intervention and when other treatment is appropriate. The Respondent failed to meet the appropriate

<sup>1</sup> Patient names are not used in this Consent Order because of the confidentiality provisions of Health General Article §4-301 *et seq.*

standard of care in his treatment of two (B and E) patients by performing hysterectomies based upon the diagnosis of squamous metaplasia or cystic hyperplasia since those diagnoses are not recognized indications for hysterectomy.

12. The appropriate standard of care required that the treating physician be prepared to provide the patient with proper medical care after his/her surgery. The appropriate standard of care requires that the physician take appropriate specimens during surgery, for analysis, and that the treating physician refer the patient to medical specialists after surgery, when appropriate. The Respondent failed to meet the appropriate standard of care with regard to two (L and M) patients when he proceeded properly with the hysterectomies, but failed to: (1) obtain separate lab specimens during surgery and (2) provide for postoperative treatment, including referral to gynecologic oncologists.
13. The appropriate standard of care requires a treating physician to keep full and accurate records of the medical condition(s) of all patients under his or her care. The appropriate standard of care requires that the physician keep the patient's medical records in a condition that would permit any other qualified physician to take over the care and treatment of the patient and be able to rely on the existing records. The respondent failed to meet the appropriate standard of care in his treatment of four (G, H, K, and L) patients by failing to keep adequate medical records regarding their conditions.

### Conclusions of Law

Based upon the Findings of Fact and in reaching this Consent Order, the Board concludes, as a matter of law, that the Respondent failed to meet appropriate standards as determined by appropriate peer review for the delivery of quality medical and surgical care performed in an outpatient surgical facility, office, hospital, or any other location in this State, (See former *Md. Health Occ. Code Ann.* §14-404(a)(22), present HO §14-404(a)(22).)

The Board dismisses the charges under former *Md. Health Occ. Code Ann.*, §14-504(a)(3) and (4) (present HO §14-404(a)(3) and (4)): (3) Is guilty of immoral or unprofessional conduct in the practice of medicine; and (4) Is professionally, physically, or mentally incompetent.

### Order

Based upon the foregoing Findings of Fact, it is this 4th day of March 1991, by an affirmative vote of the majority of the full authorized membership of those members of the Board of Physician Quality Assurance of Maryland who considered this case,

ORDERED that the Respondent's license to practice medicine is **SUSPENDED**; and it is further

ORDERED that the **SUSPENSION** of the Respondent's

license to practice medicine in the State of Maryland is **STAYED** and the Respondent is placed on **PROBATION** for a period of three years from the date of this Order; and be it further

ORDERED that the Board **DISMISSED** the charges under former *Md. Health Occ. Code Ann.*, §14-504(a)(3) and (4) (present HO §14-404(a)(3) and (4)): (3) Is guilty of immoral or unprofessional conduct in the practice of medicine; and (4) Is professionally, physically, or mentally incompetent; and be it further

ORDERED that no additional charges regarding the Respondent's conduct of hysterectomies, prior to October 26, 1990, will be the subject of any charges under the Maryland Medical Practice Act against the Respondent; and be it further

ORDERED that the Respondent is subject to the following conditions of probation for a period of three years from the date of this Order:

1. The Respondent may continue to practice medicine.
2. The Respondent's surgical practice of medicine shall be limited by the terms of this probation.
3. The Board has full power to suspend the Respondent's license to practice medicine, on a summary basis, should the Respondent fail to abide by the conditions of his probation.
4. The Respondent will conduct no surgery in any facility in the State of Maryland except, the Respondent may continue to admit patients to hospitals for purposes of labor and delivery or scheduled Cesarean sections. He also may admit patients to acute care hospitals for medically indicated treatment of miscarriage or spontaneous abortions, including dilatation and curettage (D&C). He also may perform amniocentesis, circulage, dilatation and curettage for postpartum bleeding, and treatment of ectopic pregnancy (including laparoscopy and laparotomy).
5. In the event that a patient admitted for labor and delivery were to require surgery during the course of her labor and delivery, the Respondent may proceed with those limited surgeries. No elective procedures are included in those surgeries. Patients admitted for Cesarean sections also may not have additional elective surgery organ removals during their surgery. In the event that a patient of the Respondent desires tubal ligation during her childbirth, vaginal delivery, or Cesarean section, then the Respondent may go forward with that procedure.
6. Respondent may perform circumcisions.
7. Respondent may perform tubal ligations.
8. The Respondent is permitted to continue his office practice of obstetrics and gynecology in St. Mary's County, Maryland.
9. If the Respondent performs a Cesarean section or other surgery, the Respondent shall notify Valarie A. Shanahan, Compliance Officer, or, in her absence, Margaret T. Anzalone, Deputy Director of the Board of Physician Quality Assurance immediately, within seven days of any



surgeries he performs under the terms of his probation including but not limited to Cesarean sections, emergency removal of reproductive organs, emergency salpingo-oophorectomies, emergency total or partial hysterectomies, or any other surgical procedure conducted by the Respondent. The Respondent shall further advise the Board of the name of the patient involved, the time and place of said surgery, and the nature of the circumstances that caused the Respondent to perform the surgery.

10. The Respondent has submitted to an expedited peer review to include, at a minimum, twenty Cesarean sections. Should the Board determine that the results of this peer review warrant action, the Board may take the action it deems necessary with respect to the Respondent's license notwithstanding Respondent's present suspension with stay and probation. However, should the Board desire to take any action, the Board will notify the Respondent's counsel in addition to notifying the Respondent at the time that the Board acts.
11. The Respondent will be subject to an annual peer review of his practice by the Board, administrative costs to be paid for by the Respondent, and conducted by the Board's duly authorized agent or agents. The first peer review should occur on or about March 1, 1992, and shall be conducted in accordance with the Board's *Peer Review Manual*.
12. The Respondent shall complete an additional twenty-five hours of Board approved Class I Continuing Medical Education credits each year, over and above the normal requirements, during his probation. The Respondent shall bear all costs involved with his attendance and completion of the Continuing Medical Education programs. A month before taking the continuing education credits, Respondent shall submit to the Board's Settlement Conference and Case Resolution Committee, his request for approval of his continuing education credits, together with any information necessary for the Board to evaluate the proposal, and be it further

ORDERED that if Respondent demonstrates, three years after the execution of this Consent Order, that he has met the conditions of probation, Respondent may submit a petition to the Board for reinstatement of his license, and be it further

ORDERED that should the Respondent retire from the practice of medicine pursuant to this Consent Order, the Respondent will no longer be required to comply with the conditions of probation. In the event that the Respondent chooses to retire from the practice of medicine, he will sign and deliver a letter to the Board of Physician Quality Assurance requesting that his medical license be placed on an inactive status. At the time of his taking an inactive status, the Respondent shall turn in his DEA and CDS licenses. Respondent shall be required to fill out the appropriate application and pay the required fee; and be it further

ORDERED that if Respondent retires from the practice of

medicine, the Respondent will provide the Board with copies of his letters of resignation to all hospitals where he maintains privileges within five days of those resignations, and be it further

ORDERED that the Respondent will be responsible for all costs incurred under this Consent Order; and be it further

ORDERED that this Consent Order is considered a public document pursuant to *Md. State Gov't Code Ann. §10-611, et seq.*

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

### Consent

By signing this Consent, I hereby accept and agree to be bound by the foregoing Consent Order and its conditions and restrictions, consisting of fourteen pages.

1. By signing this Consent, I hereby do not admit to the truth of the Findings of Fact or agree with the charges or the Conclusions of Law. Indeed, I dispute and deny any liability or wrongdoing. However, I submit to the foregoing Order in a desire to settle and resolve this litigation.
2. I hereby acknowledge the validity of this Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my own behalf, and to all other substantive and procedural protections provided by law.
3. I also recognize that I am waiving my right to appeal any adverse ruling of the Board that might have followed any such hearing. By this Consent I waive all such rights.
4. I sign this Order after having an opportunity to consult with an attorney, without reservation, and I fully understand its meaning and effect.

SARKIS SARKISSIAN MD

### Exhibit A

In the Matter of  
Sarkis Sarkissian MD  
Before the  
Maryland Board of  
Physician Quality Assurance

### Consent Agreement

Comes now the Respondent Dr. Sarkis Sarkissian by and through counsel Wendy L. Shiff of Anderson, Coe and King and the State of Maryland by and through Steven P. Lemmey, Assistant Attorney General, Administrative Prosecutor to the Board of Physician Quality Assurance and the Board and hereby state the following:

1. Pursuant to the Board's investigation of the practice of Dr. Sarkis Sarkissian, the Board voted on October 16, 1990 to issue a Consider Emergency Action on the Respondent's license to

- practice medicine. The Board's actions were based upon the Board's receipt of the Peer Review Committee Report and the reports of the two assigned peer review specialists.
2. On October 22, 1990, the Respondent was advised, by telephone, of the Board's intention to take action. At that time he was further advised to retain the services of an attorney. Later on October 22, 1990, the Respondent was able to retain the services of Wendy L. Shiff as his attorney for this matter.
  3. The Respondent, through his counsel, has indicated that he wishes to consent to this Agreement subject to its conditions. As part of this Agreement, the Respondent will retain his license to practice medicine subject to the following conditions:
    - a. He may continue to practice medicine.
    - b. He waives his right to a hearing regarding any emergency action being considered by the Board on October 24, 1990, in Case 89-0479.
    - c. His surgical practice of medicine shall be limited by the terms of this Agreement.
  4. The Respondent and the State seek to avoid the necessity of a hearing on the Emergency Action by requesting that the Board accept this Consent Agreement.
  5. The Respondent agrees that the Board has full power to entirely suspend his license to practice medicine, on a summary basis, should he fail to abide by the conditions set out in this Consent Agreement.
  6. Effective immediately, it is specifically agreed that Dr. Sarkis Sarkissian may continue his practice of medicine in the State of Maryland pending the outcome of the charges that are to be brought against him under the Maryland Medical Practice Act. The Respondent may continue the practice of medicine pending the outcome of those charges conditioned upon his agreement that:
    - a. The Respondent will conduct no surgery in any facility in the State of Maryland except, the Respondent may continue to admit patients to hospitals for purposes of labor and delivery or scheduled Cesarean sections. He also may admit patients for medically indicated treatment of miscarriage or spontaneous abortion.
    - b. In the event that a patient admitted for labor and delivery were to require surgery during the course of her labor and delivery, the Respondent may proceed with those limited surgeries. No elective procedures, sterilization, or organ removals are included in those surgeries. Patients admitted for Cesarean sections also may not have additional elective surgery or organ removals during their surgery. In the event that a patient of the Respondent desires tubal ligation during her childbirth, then the Respondent may go forward with that procedure, provided that the patient has obtained a second obstetric opinion that the tubal ligation is appropriate.
    - c. All other surgery required by any of the Respondent's patients must be referred to other qualified physicians by the Respondent and the Respondent's only role in those surgeries shall be that of providing the medical records to the new physician and any other information or assistance that the new physician may request of him with regard to the referred patient.
    - d. The Respondent is permitted to continue his office practice of obstetrics and gynecology in St. Mary's County, Maryland.
    - e. The Respondent and the Board must execute this Consent Agreement by the close of the Board's business on October 24, 1990.
  7. If the Respondent performs a Cesarean section or other surgery,

the Respondent shall notify Stephen H. Johnson, Esq., Chief Case Manager, or, in his absence, Margaret T. Anzalone, Deputy Director of the Board of Physician Quality Assurance immediately, (within forty-eight hours) of any surgeries he performs under this Agreement including but not limited to Cesarean sections, emergency removal of reproductive organs, emergency salpingo-oophorectomies, emergency total or partial hysterectomies, or any other surgical procedure conducted by the Respondent. The Respondent shall further advise the Board of the name of the patient involved, the time and place of said surgery, and the nature of the circumstances that caused the Respondent to perform the surgery.

8. The Respondent shall submit to an expedited peer review to include, at a minimum, twenty Cesarean sections. If the Board determines that the results of this peer review indicate a threat to the public, the Board may suspend the Respondent's license summarily.
9. The parties also agree that the Board shall advise all hospitals, in Maryland, where the Respondent has active privileges of the full and complete content of this Agreement.
10. The Respondent and Office of the Attorney General hereby state that this document represents the full and complete content of the Agreement between the Board of Physician Quality Assurance and the Respondent, Sarkis Sarkissian. The Respondent further states that he had an opportunity to review this Consent Agreement with his counsel and that he wishes for the Board of Physician Quality Assurance to adopt this Order.

The foregoing five-page document is agreed upon, by the p (sic - arties this 24th) day of October 1990 by the State Board of Physician Quality Assurance through Israel H. Weiner MD, Chairperson, and the Respondent, Sarkis Sarkissian MD

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

SARKIS SARKISSIAN MD, Respondent

WENDY L. SHIFF, Attorney for Respondent

STEVEN P. LEMMEY  
Assistant Attorney General  
Administrative Prosecutor



**In the Matter of  
Angelita A. Topacio MD  
Before the  
Maryland Board of  
Physician Quality Assurance**

### **Order Terminating Probation and Reinstating License**

**B**y Order dated November 6, 1989 (the 1989 Order), the Board of Physician Quality Assurance (the Board) found Angelita A. Topacio MD (the Respondent) guilty of committing prohibited acts as set forth in Health Occupations Article, *Annotated Code of Maryland* (HO) §14-404. Specifically,



the Board charged Respondent with violation of Conditions of the Final Order of April 10, 1984 issued by the Commission on Medical Discipline (the Commission). The Board released Respondent from the probation imposed in the Final Order of April 10, 1984, and placed Respondent on probation for one year, conditioned upon the Respondent complying with conditions of probation (the Conditions of Probation). The Order further provided that one year from the effective date of the Order, that being November 6, 1990, if the Respondent demonstrated to the Board's satisfaction that Respondent had complied with the terms and conditions of his probation, the Board would entertain a petition for altering the terms of Respondent's probationary status.

By letter dated November 20, 1990, Respondent petitioned the Board for Termination of Probationary Status and Reinstatement of her License (Petition) to practice medicine in Maryland. At its meeting on February 13, 1991, the Board reviewed Respondent's Petition. Based upon the Board's review of the Petition, the Board determined that Respondent had fulfilled the Conditions of Probation contained in the 1989 Order.

### Findings of Fact

Based on the information known and available to it, the Board finds that:

1. The Board has not received any new complaints on the Respondent. No hospital reports or malpractice claims have been filed against the Respondent since the time of the 1989 Order.
2. On August 28, 1990, the Board referred this case to the Medical and Chirurgical Faculty of Maryland for a peer review. An office review was conducted on September 21, 1990. Based upon the report from the office visit, the Practice Review Committee recommended that Respondent be released from probation at this time.

### Conclusions of Law

The Board concludes, as a matter of law, that Respondent has satisfactorily complied with all conditions of probation as set forth in the Order of 1989.

### Order

Upon the foregoing Findings of Fact and Conclusions of Law, it is this 25th day of February 1991 by a majority vote of the full authorized membership of the Board

ORDERED that effective as of the date of this Order, the Conditions of Probation imposed upon Respondent's practice of medicine by the Board's 1989 Order are hereby TERMINATED and of no further force and effect; and be it further

ORDERED that Respondent's license to practice

medicine in the State of Maryland be REINSTATED without any condition or restriction whatsoever; and be it further

ORDERED that this is a Final Order and as such is considered a public document pursuant to the Maryland Public Information Article, State Government Article, *Annotated Code of Maryland*, §§10-611 *et seq.*, specifically §10-617(h)(2)(vi).

ISRAEL H. WEINER MD, Chairperson  
Board of Physician Quality Assurance

### Upper Park Heights Park Newport Apartments

2 bedroom residents from \$795, includes heat and hot water, electric additional.

Luxury, mid-rise building with elevator, secured entrance and assigned parking. 2 bedroom apartments with 2 full baths, eat-in kitchen, lots of closets, fully carpeted, individually controlled heat and air conditioning.

Located at 7219 Park Heights Avenue. Please call  
**764-2500 or 486-1869**  
for an appointment.

Owned and managed by City Wide Management Co. 837-2900



When you can buy  
any home, here's  
why you'll choose  
a Villager.



**1.** Villager offers the finest homesite locations—in Green Spring Valley communities as well as Worthington Park and the Falls Road corridor. We'll also build your home on your lot... with our plans or yours. Below market financing.

**2.** Breathtaking estate-size home designs, and the reputation for using the very finest materials and craftsmen.

**3.** The opportunity to work one on one with our designers. We'll custom build from your designs or from ours. Our new 1991 designs include the Euro Classic I Award of Excellence recipient from the Homebuilders Association of Maryland and the next generation of our Euro Classic series. Call now. We're building just a few homes for 1991, from \$290,000 to over \$1 million. Phone Sandy Marenberg or Karen Pine for a personal consultation.

Ruxton—Knollcrest Farms at Hillstead and Huntspring  
Pikesville—Helmsley Court, Anton North II—(Merry Hill)  
Owings Mills—Worthington Park and Foxchase  
Stevenson—Greenspring Subdivision



**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

Brokers  
Protected

McDonogh Crossroads Office Park  
20 Crossroads Drive, Suite 113 • Owings Mills, MD 21117  
Phone: (day) 363-0963 (evening) 602-0820

# Succeed In The 90's With

# SMART C·H·A·R·T

## Computerized Medical Records

Did you know that most doctors spend about 40% of their time recording and trying to decipher patient histories from traditional Medical Charts?

Smart Chart's unique software package affords quick and easy access to medical records.

By using Smart Chart, you will have more time to...

- See patients
- Conduct research
- Enjoy yourself!

Call Smart Chart, Inc. today and see how easy it is to *Succeed in the 90's with Smart Chart!*

### MAIL OR FAX THIS COUPON TO:

Smart Chart, Inc.

11212 Grandview Avenue, Suite 108

Wheaton, Maryland 20902

1-800-783-7825

301-946-7825 (Metro. D.C.)

Fax 301-762-2831

YES! I am interested in Smart Chart.

Name \_\_\_\_\_

Company \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

## Maryland Metabolic Institute Announces Their New Location and Continuation of Services

A new strategy to improve patient care

*We help the physician  
by helping the patient  
help themselves*

**H**ealth can be maintained by teaching patients good care habits. Especially for those with needs related to:

- diabetes including gestational diabetes
- weight reduction and maintenance
- dietary problems of all types
- stress management

Now the time consuming burden of patient training can be transferred from a busy practice to a competent health care team. A certified nurse educator, master trained dietitians and behavior counselors will return the patient well educated to their primary care physician.

Training Programs Include:

### Diabetes Education

- 20-hour courses, children and adults
- glucose monitoring
- ambulatory insulin instruction
- diabetes and pregnancy
- gestational diabetes

### Behavior Modification

- weight reduction and maintenance
- modified fasting: Optifast
- limited diets: Optitrim
- full food control: LEARN®
- stress management

### Dietary Counseling

- all medical disorders

Call for an appointment or further information or have patients schedule a consultation.

**MMI Diabetes Center\* (301) 296-0025**  
**MMI Optifast® Weight Reduction and Maintenance Program\*\* (301) 494-8338**

\*formerly International Diabetes Center of Maryland

\*\*affiliated with GBMC Agency, Inc.

New location:

Between Kenilworth and York Road at 695, Exit 26S

110 West Road, Suite 210

Towson, Maryland 21204

Thaddeus E. Prout, M.D. FACP



## Auxiliary

### Component Society Presidents: 1991-1992



**Allegany County** - Mano Nava  
(Mrs. Samuel)

As President, Mrs. Nava plans to continue the Auxiliary's project of working with the schools to teach healthy eating habits. She has established two new committees -- a medical family support group and a long-range planning committee

charged with developing a five-year plan. She has also instituted a gavel club for past presidents. Encouraging past auxiliary members to rejoin remains an ongoing goal.

Mrs. Nava's other volunteer activities include duties at an adult day-care center, the Red Cross, and a high school. Her husband is a psychiatrist.



**Baltimore County** - Dianne Nagel  
(Mrs. J. David)

As President, Mrs. Nagel plans to center the Auxiliary's health projects around children and their needs. These efforts will be coordinated with the Baltimore County Health Department and Department of Social Services. Auxiliary

members will also work with hospitals' newborn nurseries to determine needs (for example, supplying layettes and clothing). Every attempt will be made to involve the membership in projects that can easily fit within time-frames available to members with careers.

Mrs. Nagel is a registered nurse who is active in the Parent Association and is on the Maryland State Association of Quality Assurance Professionals Committee. Her husband, an internist, is the 1991-1992 President of Med Chi.

**Anne Arundel County** - Margaret Lynch  
(Mrs. Garrett)

This year Mrs. Lynch hopes to have members become active in projects. These include the Senior Health Fair in October, Holiday Sharing, Children's/Seniors' holiday, and giving gifts for Sarah's House, a homeless shelter.

Mrs. Lynch also volunteers in her children's school as well as teaching aerobics to seniors. Her husband is an orthopaedist.



**Charles County** - Fatima Haziq  
(Mrs. Mohammed)

This Auxiliary sponsors sports physicals during the summer. The money raised goes toward scholarships for high school students planning to enter health-related fields. The Auxiliary also helps send children to football camp and

provides t-shirts for children at sports camp.

In addition to guiding the Auxiliary, Mrs. Haziq volunteers in her daughter's school and works in her husband's office. Her husband, a urologist, is a Past President of the Charles County Medical Society.



**Baltimore City** - Adriana Zarbin  
(Mrs. Gino)

Mrs. Zarbin is both Acting President and Treasurer of the Baltimore City Medical Auxiliary. She has been President twice before and has held most of the positions in between! Her goal is to "hold the Auxiliary together."

Her primary hobby is music and she is a Past President of the Opera Guild. Her three sons include an ophthalmologist, a dentist, and a lawyer. Her husband, a pediatrician, has long been a member of Med Chi.

**Frederick County** - Maria Baker  
(Mrs. J. Fred)

Mrs. Baker would like the Auxiliary to give Doctors' Day more exposure and to expand health projects.

A "retired" pharmacist and medical technologist, she also is active in the Frederick Memorial Hospital Auxiliary



(especially fund-raising for hospital expansion), in her church, and in the garden club. Her husband is a pediatrician and Past President of the Frederick County Medical Society.

#### Harford County - Denise Cann (Mrs. Ronald)

Increasing membership and encouraging current Auxiliary members to be more active are important goals for Mrs. Cann. Health education programs for the schools will be a special emphasis this year although the Auxiliary also hopes to have more family social activities.

Her other volunteer interests are her son's school, the Occupational Therapy Association, and Temple Auxiliary. Mrs. Cann is an occupational therapist, although she is not currently working in that field. Her husband is a psychiatrist.



**Howard County** - Helene Segal (Mrs. Carl)

Mrs. Segal is acting President this year. She has previously served as President for two years, as Chairperson of Doctors' Day, and as editor of *Hygeia Filiae* for two years, and has been actively involved in the Auxiliary for more than fifteen years.

Mrs. Segal is currently on the nursing staff at Johns Hopkins Hospital, although she took off some time when her mother died of leukemia last summer. Her husband is a psychiatrist in Columbia and has served on several Med Chi committees in the past. They have four children and two grandchildren. Her hobbies are counted cross-stitch, embroidery, and reading.

#### Kent County - Elizabeth Donovan (Mrs. David)

Mrs. Donovan plans for this small close-knit Auxiliary to lend support to the doctors of the medical society in whatever way needed and to be involved in community work.

She is a registered nurse in the Kent County Hospital Emergency Room, is involved in KART (riding rehabilitation for the handicapped), and volunteers in the Kent and Queen Anne's Hospital Auxiliary's Christmas shop. Her husband is a pathologist.

#### Montgomery County - Karen Mausner (Mrs. Mark)

As President of the Auxiliary this year, major goals for Mrs. Mausner are families helping families and membership. Through a holiday boutique, she would like to focus on fund-raising for a homeless shelter. In addition, there will be

children's programs sponsored at a homeless shelter, as well as a Children's Health and Safety Fair in conjunction with the Montgomery County government.

Mrs. Mausner also volunteers in her children's schools and teaches a self-defense seminar for women. A professional in human resources management, she is married to a plastic surgeon who is Vice Chairman of the Medical Society's Committee on Young Physicians and a member of the Community Affairs and Membership Committees.



**Prince George's County** - Isabelita (Vicki) Casibang MD (Mrs. Vincent)

Dr. Casibang hopes to increase membership by having the Auxiliary offer something to members such as lectures or a shopping spree. This year, the Auxiliary will raise funds for AMA-ERF, community



services, and the Ardmore and Ardwick Rehabilitation Center through a luau and an auction of items donated by businesses.

A member of the Philippine Medical Auxiliary, she also serves as National Secretary of VERMM Alum Association. Dr. Casibang's husband is a general surgeon.

#### Washington County - Mary Newby (Mrs. John)

Mrs. Newby hopes to bring back past members and keep them active; transportation and babysitting will be offered for new members. The third year in a row for Organ Annie, other projects include offering scholarships for local students entering medical fields and conducting a health fair at the prison.

Mrs. Newby is a homemaker and part-time student working toward a degree in education. Her free time is divided among the Symphony Guild, the Board of "Dream Come True," and coaching and refereeing soccer. Her husband, a pathologist, is currently President of the Washington County Medical Society.







**Wicomico County - Deborah Raffetto (Mrs. Joseph)**

In addition to involving more members, Mrs. Raffetto plans to have the Auxiliary work closely with the Medical Society to promote health education projects (including AIDS awareness), as well as continue the Organ Annie and

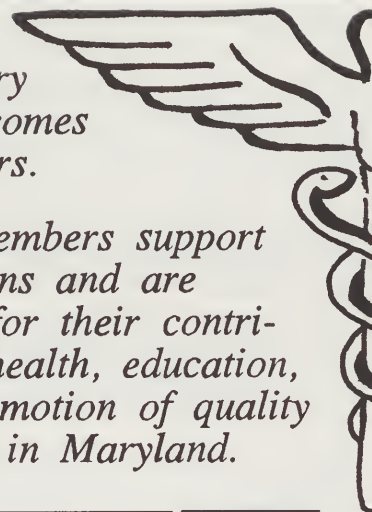
Organ Apron programs. She hopes that children will become aware of their own bodies through the distribution of the book, *The Magic School Bus Inside the Human Body*.

Though not currently working in the field, Mrs. Raffetto is a registered nurse, who volunteers at her children's school library. Her husband is a cardiologist. ■

# MARYLAND

*The Auxiliary  
always welcomes  
new members.*

*Auxiliary members support  
the physicians and are  
recognized for their contri-  
butions to health, education,  
and the promotion of quality  
health care in Maryland.*



For information on becoming a member, call JoAnn Troisi at Med Chi's Auxiliary office.

539-0872 (Baltimore area)  
1-800-492-1056 (toll free in MD)



## Are Your Offices In Need Of Major Surgery?

Chaotic traffic patterns, inadequate waiting areas, abrasive color schemes, a lack of integration of special equipment — all symptoms of a poorly designed medical suite. Symptoms that can increase the stress on your entire staff, cost you time, money and even your patients.

This is why many healthcare professionals seek the services of Levin/Brown. As one of the region's leading architects and interior designers of medical suites, surgery and ambulatory care facilities, laboratories, and medical office buildings, we can show you how to make your offices a far more productive place to practice medicine.



**Levin/Brown & Associates, Inc.**

Mark David Levin, AIA

Jay Ira Brown, AIA

Architects/Interior Designers

*Designers of the Total Medical Environment*

17 Warren Road • Suite 7B • Baltimore, Maryland 21208 • (301) 486-9006

## You Manage The Office Let Us Do The Rest!

Low Cost Initial Investment  
Daily Management Reports  
Accounts Receivable Report  
Service Analysis Report  
Aging Reports  
BC & BS of MD Forms  
MediCare Forms  
Medical Assistance Forms  
Electronic Submission

Claims Resubmission  
HCFA 1500 Forms  
Third Party Billings  
On-Line Trans. History  
Creating Patient Statements  
Statement Mailing Services  
On-Going Support  
In-House Training  
Complete Documentation

To Put The Computer Center, Inc.  
Mainframe Computer To Work  
For You, Just Call:

**(301) 728-3883**

## Eponyms

Bart Gershen MD

**H**odgkin's Disease, discussed in the last *Word Rounds* column, is one of many medical eponyms. However, eponyms are hardly peculiar to medicine. The word itself comes from Greek *epi* -- "upon" and *onyma* -- "name." It refers to proper nouns, names of people or places -- (often lower-cased by history) which have been placed upon, or applied to, ordinary articles or objects.

In future columns, I will focus rigorously on the myriad examples which comprise, in large measure, our own rich patois. But today, let's examine some representative eponyms which are familiar to a general, nonmedical gathering.

**Guppies**, for example -- those inch-long, brightly colored fish found swimming around fresh water aquaria -- are named for RJ Lechmere Guppy of Trinidad who discovered them. **Monkey** wrenches are another example. They were named for the mechanic who invented them. His name was Charles Moncke and he worked for the firm of Bemis and Call of Springfield, Massachusetts.

The **ferris wheel** was invented by George Washington Ferris in 1893, the **saxophone** by Antoine Joseph Sax -- with financial assistance from his good friend Hector Berlioz. **Silhouettes**, shadowy profiles of people, were designed for fun by Etienne de Silhouette, a good friend of Madame **Pompadour**, who had him appointed the Controller General of France in 1759. (She, too, has been eponymized -- her name referring to a style of haircut popular in the 1940s and early 1950s. Remember Ed "Kooky" Byrnes of *77 Sunset Strip*?)

**Chauvinism**, often thought to be the creation of the women's movement, is actually derived from Nicolas Chauvin, a soldier in Napoleon's Grand Army. After suffering multiple wounds in battle, Chauvin was retired on a small pension. But, he so idolized the Little Corporal that even after Napoleon's ignominious defeat -- and for the remainder of Chauvin's life -- the fanatic idolater preached only of the infallibility of his hero and the magnificence of France. A chauvinist was, initially, a provincial, flag-waving jingoist, filled with blind patriotism. Sexist males are a recent modification.

The most famous circus acrobat of the nineteenth century -- the man who perfected the aerial somersault -- is not remembered for that accomplishment; he is recognized for the clothes he wore during the performance. His name was Jules **Leotard**. The men who invented the lighting which lit the stage for his act were German brothers, John and Anton **Kliegl**. Their name was too hard to pronounce; the light they developed is known as the **klieg light**.

During our Revolutionary War, a captain in the Virginia militia from Pittsylvania County organized an impromptu court to rid his territory of Tories and other scoundrels. Unfortunately, the justice dispensed was often as injudicious as it was swift; the men were hanged. The captain was **William Lynch**, and the punishment now bears his name.

One hundred years later and an ocean away, another captain delivered his name to eponymic posterity. The English Earl of Erne owned a huge estate in County Mayo, Ireland. He hired a captain to supervise the tenant farmers on his property. Unfortunately, a series of crop failures, culminating in the famine of 1880-81, made it impossible for the tenants to pay their rent. Instead of sympathy, the captain responded with brutal retribution -- evicting several of the farm families. The farmers and their friends retaliated. No one spoke to the captain. He could not buy food or clothing at the local shops. He was totally ostracized from the community. All his servants left him. Finally he surrendered, quietly taking his family and leaving the country.

His name was Captain Charles Cunningham **Boycott**.

Back in this country, a Texas lawyer, a hero of the war of independence from Mexico, found himself the recipient of a herd of cattle. They were payment for a debt. However, the lawyer was not a rancher and quite uncertain about how to manage this reimbursement. He moved them to an island in the Nueces River, just off the Matagordo Peninsula. A winter drought virtually dried up the river and many of the unbranded cattle wandered across and settled on neighboring ranches. Once there they did not remain unbranded very long.

The lawyer was Samuel Augustus **Maverick**, and his name, too, has found its way into our semantic history.

Several foods owe a debt of gratitude to proper names. Consider **Bibb** lettuce -- named for its developer, an amateur gardener named John B. Bibb. Or the **Bing** cherry -- for a Chinese man who cultivated the tree in Oregon in 1875. Or the **sardine** -- named for the island around which it thrives -- Sardinia.

Consider **bourbon**, which was first produced in Bourbon County, Kentucky. And, **booze** itself, named after its distiller, ES Booze of Philadelphia, who poured the contents into a bottle shaped like a log cabin with his name on the label.

When you think of eponymic food can one ignore **beef stroganoff**, or **beef Wellington**? Count Paul Stroganov, a nineteenth century Russian diplomat, and Arthur Wellesley, the first Duke of Wellington, are responsible for these delights.

And can one possibly overlook the contribution rendered by that eighteenth century libertine and gambler, John Montagu? Refusing to leave the gambling table to eat, he ordered his servant to bring him a slice of roast beef between two pieces of toasted bread. Thus did the Earl of **Sandwich** provide us with that culinary delight. (As the head of the British Admiralty during Captain James Cook's famous voyage, he was honored to have the newly discovered Sandwich Islands named for him as well. They are now, of course, known as the Hawaiian Islands.)

Chicken **tetrazzini** was prepared especially for the Italian diva, Luisa Tetrazzini. And **melba toast** was developed and named for the Australian opera star, Dame Nellie Melba. So,



too, the dessert -- peach ice cream with raspberry sauce -- **peach melba**.

Another dessert, the delectable **praline** -- that crunchy sweet almond roasted in sugar, so popular in New Orleans -- was invented by the Comte du Pressis-Praslin in honor of his guest, King Louis XIV.

In the early 1800s, a Presbyterian minister, convinced that refined white flour was not good for health, urged thousands of his followers to bake bread and crackers with unrefined, whole wheat flour. The products were named after the preacher -- Sylvester **Graham**.

However, we not only find eponyms to eat, we find them to wear as well. **Argyle** socks, named for the Duke of Argyle and his Scottish clan, were originally green and white diamond patterns. Today, only the diamond pattern is preserved; the socks are multi-colored.

On October 25, 1854, Major General James Thomas Brudenell, bedecked in his bright red and blue uniform, led his eleventh Light Dragoons into the teeth of a heavily armed Russian force at Balaclava, Crimea. It was the charge of the Light Brigade, made famous by Alfred Tennyson's epic poem. The General wore his woolen vest to protect against the biting cold. That vest's reputation has outlasted the memory of its wearer, who, by the by, was also known as the seventh Earl of **Cardigan**.

The man who gave the order for that famous and catastrophic charge was the Commander of all British Forces, General Fitzroy James Henry Somerset. He, too, wore a distinctive outfit -- a loose-fitting coat with sleeves that stretched to the neck. This was, in part, to disguise the fact that he had but one arm -- the other having been removed by field surgeons at the battle of Waterloo. The memory of Somerset's exploits, like Brudenell's, has evaporated with the mists of history. But his coat, especially those unique sleeves, are monuments to his memory. He was also known as the First Baron **Raglan**.

Hats have eponymic origins as well. Consider an early nineteenth century Englishman named Edward Stanley. He was fond of horses and horse racing. He also habitually wore a round bowler hat. In 1870, Mr. Stanley instituted an annual race for three-year olds at Epsom Downs. The contest soon became a British favorite whose popularity continues today. In fact, so renowned had this race become, that in 1875, the concept was imported into the United States, has continued to flourish, and is now part of the famous Triple Crown. Mr. Stanley was also known as the twelfth Earl of **Derby**. The English and Kentucky varieties, as well as the hat, all derive from his name.

Then there's the man who first recognized the cowboy's need for a large hat to screen him from the sun. So in 1885, in the city of Philadelphia, he started manufacturing ten-gallon, soft-brimmed, high-domed cowboy hats. The cowboys called them "John B's." The man was John Batterson **Stetson**.

Other apparel has also carried the imprimatur of the

eponym. **Tuxedos** were first developed in Tuxedo, New York. **Bloomers** were developed by Mrs. Elizabeth Miller in 1850 but created such controversy that she and her associates were not allowed to attend church services and were threatened with excommunication. This warning, however, failed to intimidate feminist Amelia Jenks **Bloomer** who wore them provocatively and often, and was rewarded for her valor by their nominal designation to posterity.

BVD is simply the abbreviated (pardon the pun) name for the company which created and manufactured them -- Bradley, Voorhees and Day.

Botanists, too, have had a field day with eponyms. Consider the following partial list: wisteria, fuchsia, poinciana, magnolia, begonia, camellia, poinsettia, dahlia, forsythia, gardenia, and zinnia.

They were named for: Casper **Wistar** MD (Anatomy Professor at the University of Pennsylvania), Leonard **Fuchs** (German physician and botanist - basic Fuchsin, a reddish-purple aniline dye, is also named for him), M. de **Poinci** (Governor of the West Indies in the 1600s), Pierre **Magnol** (French physician and botanist), Michel **Begon** (Royal Commissioner of Santo Domingo in the seventeenth century), George Joseph **Kamel** (Jesuit missionary and amateur botanist), Joel Roberts **Poinsett** (American Minister to Mexico in 1825), Anders **Dahl** (Swedish botanist), William **Forsyth** (Scottish horticulturist), Alexander **Garden** MD (Scottish-American physician and ardent tory, who left South Carolina to return to England during our Revolutionary War), and Johann Gottfried **Zinn** MD (who wrote the first anatomical atlas of the eye, became the first Director of Botanical Gardens in Gottingen, Germany, and for whom the central retinal artery is named).

**Zoysia** grass is also eponymic, having been developed by Austrian botanist Karl von Zois.

The list of common words derived from proper nouns is astonishing and continues to grow. Our automobiles, including the Buick, Cadillac, Chevrolet, Pontiac, Ford, Oldsmobile, and Chrysler, are all named after people. The **diesel** engine is named for the German engineer who invented it, Dr. Rudolf Diesel. The **Rolls-Royce** is named for two people: Sir Henry **Royce**, who designed the car, and Charles Stewart **Rolls**, champion race car driver (who later became the first Englishman to die in an airplane accident).

In 1901, the Daimler company named their fashionable automobile for the daughter of their largest car dealer. Her name was **Mercedes** Jellinek.

And the cognoscenti of the National Rifle Association (NRA) should be able to tell you that Colt, Browning, Smith and Wesson, Thompson, Derringer, Winchester, Carbine, Maxim, and Mauser are all eponyms for their inventors. The Gatling gun, or "gat" as Bogart liked to refer to it, was one as well. So, too, was the **Minnie Ball** -- made famous during our Civil War. It was invented by a French army captain, Claude Etienne **Minie**.

Indeed, **shrapnel** itself was invented by British Second

Lieutenant Henry Shrapnel in 1783. (Flak, in case you were interested, is not an eponym. It is a German acronym devised during WWII. It stands for **F**lieger **A**bwehr **K**anone -- flier defense cannons.)

William Shakespeare asked: "What's in a name? That which we call a rose, by any other name, would smell as

sweet." Eponyms, names of forgotten people and ancient places -- word fossils of mankind's yesterday -- will surely embellish and enrich our speech forever.

As we verbalize, pontificate, babble, prattle, mutter, and mumble, we often bear silent, unrecognized witness to those lives which might otherwise have passed forgotten. ■



**"As doctors, if we do the right thing at the right time we can make a difference."**

Dr. Kenneth A. Haller, Pediatrician, East St. Louis, Illinois,  
Member, American Medical Association

In one of the nation's poorest communities, Dr. Kenneth Haller is working not only to save children's lives, but to bring dignity to the lives of their parents.

He is the type of physician who brings distinction to our profession. He is the type of physician who upholds the highest ideals of medicine. He is also a member of the American Medical Association (AMA).

"I read the Principles of Medical Ethics of the AMA and was impressed by it. I'm proud to be a member," says Dr. Haller.

You are invited to join Dr. Haller and to join with him in his efforts to bring quality health care to those in need. Become a member of the American Medical Association today.

**American Medical Association**

Physicians dedicated to the health of America







*Robert Wagner Gibson MD*, the President and Chief Executive Officer of Sheppard and Enoch Pratt Health System in Towson, has been elected to the Executive Council of the Maryland Hospital Association (MHA). A graduate of the University of Pennsylvania Medical School, he is an internationally known psychiatrist and mental health advocate who has served as a visiting professor and lecturer at dozens of colleges and universities nationwide. Long active in many national organizations, he has held leadership positions with the American Psychiatric Association, the American Association of Psychiatric Administrators, the American Hospital Association, and the National Association of Private Psychiatric Hospitals. Dr. Gibson's numerous career honors include awards or citations from the Institute of the Pennsylvania Hospital, the Long Island Jewish-Hillside Medical Center, Lesley College, the American Society of Physician Analysts, the American College of Psychiatrists, the National Association of Private Psychiatric Hospitals, and the Mental Health Association of Metropolitan Baltimore; Mayor William Donald Schaefer designated June 10, 1986 as "Dr. Robert W. Gibson Day" in Baltimore. A prolific author, Dr. Gibson has been a consultant to a host of state and federal government organizations and to private industry.



*Martin D. Weltz MD, FACP* of Columbia, MD recently received a three-year appointment as Cancer Liaison Physician for the Cancer Program at Greater Laurel-Beltsville Hospital. (The Cancer Liaison Program is an integral part of the Commission on Cancer of the American College of Surgeons.) Dr. Weltz is among a national network

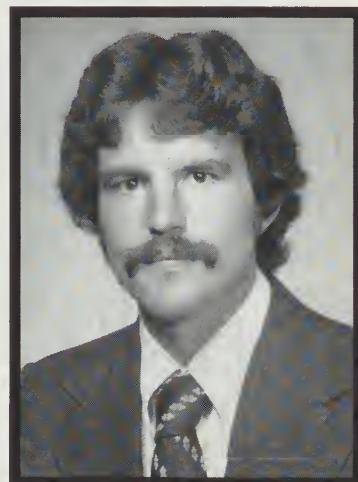
of over 2,000 volunteer Cancer Liaison Physicians who provide leadership and support to the Hospital Cancer Program, and other Commission on Cancer Activities. Dr. Weltz, who has a significant interest in the diagnosis and treatment of patients with malignant disease, also provides local leadership for the national clinical goal of the Cancer Liaison Program, which is the utilization of tumor node metastases staging.



*James J. Ryan MD* has been appointed Chief of Plastic Surgery for The Children's Hospital and Center for Reconstructive Surgery, Inc. Dr. Ryan has served on the Hospital's medical staff for seventeen years. With specialization in breast and aesthetic surgery, he is a Diplomate of the American Board of Surgery and the American Board of Plastic Surgery. Dr. Ryan received his General Surgery Training at Boston's Massachusetts General Hospital and his Plastic Surgery training at The Johns Hopkins Hospital.



*John David Reeder MD* was recently elected Vice President of the Maryland Radiological Society. Co-director, MRI/CT, Whitesquare Imaging and Magnetic Imaging Associates in Baltimore, Dr. Reeder is also an attending Radiologist at both Franklin Square and Kernan Hospitals. He received his BA (magna cum laude, Phi Beta Kappa) in Biology from Wake



Forest University in North Carolina and his MD from the University of Maryland School of Medicine (Dr. J. Bradley Prize for Excellence in Pediatrics). Author of more than twenty-five articles, he is also an accomplished speaker. Married with three children, he holds academic appointments at The Johns Hopkins University School of Medicine, Department of Radiology and Radiological Science; the University of Maryland School of Medicine, Department of Diagnostic Radiology; and the Maryland Institute of Ultrasound Technology, Neurosonography Section. He is active on several committees at Franklin Square Hospital, is a member of numerous professional societies, and is a member of the Major Medical Equipment Advisory Panel for the State of Maryland.



# Continuing...

For over fifteen years, the Med Chi Agency has been serving the needs of Maryland physicians...*your* needs, with unrivaled commitment and dedication. And as the Agency has grown, so has your trust...in us, in our products and in the way we do business with you.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial options. Among these are:



Professional Liability Insurance (Malpractice)



Personal insurance, including homeowners, auto, boat and recreational vehicle coverage and personal umbrella insurance.



Office insurance, including medical equipment, medical records, computer equipment, account receivables, workers compensation, business auto and employee dishonesty



Financial and estate planning, specifically tailored to the medical professional.



Individual and group, life, health and income protection.



Qualified and non-qualified Retirement Planning

## ...A Commitment To Service



**THE MED CHI AGENCY**  
1204 Maryland Avenue  
Baltimore, Md. 21201-5583  
(301) 539-6642  
1-800-543-1262 (in Maryland)  
FAX (301) 752-5421



Manuscripts may be sent to Editor, *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

## Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a WordPerfect or ASCII format.

Include full name of author(s) with highest degrees and academic or professional titles.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

An introductory synopsis of approximately twenty-five to fifty words is required.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to twenty in major contributions and fewer in shorter articles. Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Recognizable photos of patients are to be masked and should carry with them written permission for publication.

For more extensive information about preparing medical articles for publication, see *Uniform Requirements for Manuscripts Submitted to Biomedical Journals* compiled by the International Committee on Medical Journal Editors (available through the *Annals of Internal Medicine*).

Permission: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in *MMJ* is protected by copyright and may not be reproduced without the written permission of both the principal author and *MMJ*.



Page proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset. ■

*Clinical Neuro-Ophthalmology*. Neil R. Miller. 4th Edition. Volume 4. Baltimore: Williams & Wilkins, 1991. 2,820 pages. \$120.00

Dr. Frank B. Walsh published the first edition of this series in 1947. It was based on his experiences at the Wilmer Institute of The Johns Hopkins Medical Institutions with Dr. Walter B. Dandy. It was and is a classic, establishing the specialty of neuro-ophthalmology. Dr. William F. Hoyt of the University of California expanded this great book with Dr. Walsh. The third edition was published in 1969.

Dr. Miller, who worked under Dr. Walsh, is an acknowledged world leader in neuro-ophthalmology and a professor in the Department of Neuro-ophthalmology at Johns Hopkins. This volume is devoted entirely to vascular disorders that produce neuro-ophthalmologic signs and symptoms. Three preceding volumes deal with tumors, nervous systems of the eyes, and optic nerve disorders. Chapter headings in this volume include anatomy, physiology, aneurisms, fistulas, cerebrovascular disease, migraine vasculitis, and venous occlusive disease.

This edition is even better illustrated than the previous three with photographs and diagrams of case studies of the various disorders; explanations of the figures are very understandable. It is well-written with helpful subject headings. The references are extensive and are noted in the text so as to make clinical information easy to find.

There is no other source of information acquired from so many years of experience which is laid out as if the patient were in front of the physician in the Osler tradition. The book is appropriate for neurologists, neurosurgeons, ophthalmologists, and all medical libraries, and would be of interest to any physician. Its cost is reasonable compared to such volumes in other fields. It will not be superseded soon.

HENRY B. WILSON MD  
Baltimore

## Physician Placement Services

**The Medical and Chirurgical Faculty of the State of Maryland** maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

Physician Placement Service  
1211 Cathedral St., Baltimore, MD 21201  
(301-539-0872)

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the *Physician Placement Service*. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland.

*MMJ* announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

# Vacation time is burglary time.

Home Protection  
only \$195<sup>00</sup>



**Security  
Systems**

## Great Value!

When you leave on your summer vacation, there's enough to do,

without worrying about your home and possessions while you're gone. Summer season is high season for criminals too! Before you leave, call ADT and have an ADT® Safewatch Security system purchased by Dec. 14, for only \$195 (over 50

percent off the original price of \$395). ADT has the largest network

of central monitoring stations to help provide for your 24-hour protection. Remember, this offer is good only until Dec. 14, 1991, so call right away, and have a safe trip! Visa, MasterCard and American

Express cards accepted.

### Here's what you get

**ADT Safewatch Security Package**  
2 door contacts  
1 electronic motion detector  
1 interior sounder  
Electronic Control Unit with keypad  
Window Stickers  
Central Station Monitoring for only \$19.95 per month.

Valid until Dec. 14, 1991

Call ADT today at (800) ADT-INFO

Only \$195<sup>00</sup>

This coupon is valid for a price of \$195 for the installation of a new ADT Safewatch Security system consisting of 2 door contacts, 1 motion detector, 1 interior sounder, and a control unit with keypad, purchased by 12/14/91, with a central monitoring contract at \$19.95 per month. You must present this coupon upon contract signing. Only one coupon per security system. VISA, MasterCard, and American Express Cards accepted. Not valid with any other discount offer. Original coupons only.



# A 194TH ANNUAL MEETING

Medical  
&  
Chirurgical  
Faculty  
of  
Maryland

**Thursday, Friday and Saturday  
April 30, May 1 and May 2, 1992**

at the  
**Omni Inner Harbor Hotel  
Baltimore, MD**

For more information call  
(301) 539-0872 or (800) 492-1046 IN MD.  
For Hotel Reservations call (301) 752-1100.

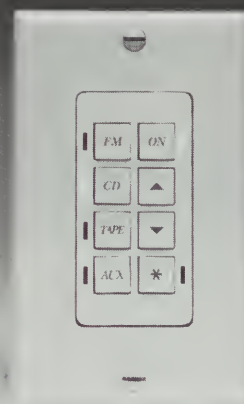
**Mark Your Calendar!**

Turn it up. Turn it down.  
Let the music follow you around.  
Whole house stereo from Gramophone.

Phantom of The  
Opera in the  
kitchen

Mozart in the  
bedroom

Ronstadt in  
the den



Everyone can  
have their  
music where  
they want it.

Whether you're looking for a new CD player  
or a whole house stereo, Gramophone  
can bring your home to life with music.

## GRAMOPHONE

Maryland's Finest Stereo and Video Stores

BALTIMORE • 821-5620 ∞ COLUMBIA • 465-5500



Medical and Chirurgical Faculty of Maryland  
presents  
**GALAPAGOS ADVENTURE**

Guayaquil, Cuenca & Quito, Ecuador

Cruising the Galapagos Islands: San Cristobal • Española • Floreana  
• Academy Bay, Santa Cruz (Darwin Research Station)  
South Plaza



*Fascinating 12 Days - Tour/Cruise Including Briefings by  
Professional Naturalists in the Galapagos  
Plus an optional extension to the Ecuadorian Jungle*

Departs: Monday, April 6, 1992

Returns: Friday, April 17, 1992

**Only \$3345\*** Baltimore

\* per person based on double occupancy

**CALL AND ASK  
ABOUT OUR  
EARLY BOOKING  
DISCOUNT!**

*Included features*

- Round-trip jet transportation
- Private Deluxe motorcoach
- Complete travel information prior to departure
- Professional Vantage Travel Tour Director
- First Class Hotel Accommodations
- Full breakfast daily
- Welcome Dinner

*Vantage Features:*

- A convenient Travel Document Wallet, Name Badge and distinctive Luggage Tags
- A deluxe, oversized Travel Bag
- Optional Insurance Coverage is available for

- Baggage, Accident and Trip Cancellation/Interruption at special low cost group rates
- Automatic U.S. \$250,000 Common Carrier Accident Insurance Plan for each ticketed Vantage Passenger at no additional charge

For additional departure cities and pricing call Toll-Free !

**1 (800) 322-6677 ☎ 1 (800) 833-0899**

(U.S. except Massachusetts)

(Massachusetts & Canada)

**TELL ME MORE!** Please send me information on the Medical and Chirurgical Faculty of Maryland Galapagos Adventure as well as FREE color brochures on the trips I've checked below.

Name \_\_\_\_\_

Address \_\_\_\_\_ Apt # \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip \_\_\_\_\_ Phone \_\_\_\_\_

- ☐ Transcanal Cruise
- ☐ Latin America
- ☐ Amazon Cruise
- ☐ Mexican Riviera
- ☐ American Southwest
- ☐ Canadian National Parks
- ☐ Costa Rica
- ☐ Russia
- ☐ National Parks

- ☐ Scandinavia & Russia Cruise
- ☐ Around The World (30 Days)
- ☐ New England/Canada Cruise
- ☐ New England/Canada Land
- ☐ Alaska/Denali Park

- ☐ Alaska/Inside Passage
- ☐ Antarctica.
- ☐ Exotic Far East
- ☐ Hawaii/Tahiti
- ☐ Caribbean
- ☐ Europe/Mediterranean
- ☐ Bermuda
- ☐ British Isles
- ☐ Other—Describe: \_\_\_\_\_

Please tell us a little about yourself?

- 1 I plan to travel in: 19 \_\_\_\_\_
- 2 My age is: ☐ 20-29 ☐ 30-39 ☐ 40-49  
☐ 50-59 ☐ 60-69 ☐ 70-79 ☐ 80+
- 3 Type of travel I prefer: ☐ Cruise only  
☐ Land only ☐ Both
- 4 Length of travel I prefer: ☐ Less than 7 nights  
☐ 7-10 nights ☐ 11-14 nights  
☐ 15 or more nights
- 5 Would you like to be advised of last minute cruise discounts? ☐ Yes ☐ No
- 6 Last trip abroad was ☐ Less than 3 years ago  
☐ 3+ years ago ☐ Never

Return to:

**VANTAGE TRAVEL SERVICE, INC.**  
Attn: Lorrie Wright  
111 Cypress Street,  
Brookline, MA 02146

9948AD  
22459

Saturday, November 16, 1991  
Med Chi Faculty Building, 1211 Cathedral Street, Baltimore, MD 21201

- 8:00 a.m. – 8:45 a.m. **REGISTRATION/CHECK-IN**  
(continental breakfast)
- 8:45 a.m. – 9:00 a.m. **OVERVIEW**
- 9:00 a.m. – 10:00 a.m. **THE ROLE OF THE PRIMARY CARE PHYSICIAN IN THE TREATMENT OF CHEMICAL DEPENDENCE** *Dan H. McDougal, M.D.*, Med Chi Physician Rehabilitation Committee
- 10:00 a.m. – 11:00 a.m. **ASSESSMENT AND TREATMENT OF ALCOHOLISM IN DIFFERENT AGE GROUPS** *Franklin T. Evans, M.D.*, Chair, Med Chi Committee on Alcoholism and Chemical Dependency
- 11:00 a.m. – 11:15 a.m. **BREAK**
- 11:15 a.m. – 12:15 p.m. **CONCURRENT SESSIONS**  
Session A: **SEXUAL EXPLOITATION OF PATIENTS: EVALUATION AND TREATMENT OF SEXUAL ADDICTION** *Richard Irons, M.D.*, Medical Coordinator, Professional Assessment Program, Golden Valley Treatment Center, Golden Valley, Minnesota  
Session B: **ASSESSMENT OF ADOLESCENT CHEMICAL DEPENDENCY** *Rev. Edward Reading, M.Div.*, NCAC II, Assistant Director, Physicians' Health Program, Medical Society of New Jersey  
Session C: **PREVENTING PHYSICIAN IMPAIRMENT** *Susan Kalia, M.D., M.P.H.*, Director, University Health Services, The Johns Hopkins University School of Medicine
- 12:15 p.m. – 1:30 p.m. **LUNCH**
- 1:30 p.m. – 2:30 p.m. **THE IMPAIRED PHYSICIAN** *Penelope Zeigler, M.D.*, Medical Director, Pennsylvania Medical Society Physician Health Program
- 2:30 p.m. – 3:30 p.m. **CONCURRENT SESSIONS**  
Session A: **DRUG TESTING FOR PHYSICIANS AND OTHER HEALTH PROVIDERS** *Stanley R. Platman, M.D.*, Vice-President Medical Affairs and Chief of Psychiatry, Homewood Hospital Center; Chair, Med Chi Physician Rehabilitation Committee  
Session B: **THE HIV POSITIVE PHYSICIAN** *Fred C. Gill, M.D.*, Chair, Med chi Committee on AIDS and *John Bartlett, M.D.*, Vice-Chair, Med Chi Committee on AIDS  
Session C: **UTILIZING A TRADITIONAL ADDICTION TREATMENT APPROACH IN THE TREATMENT OF EATING DISORDERS** *Townsend Pennington, M.D.*, Medical Director, The Willough at Naples, Naples, Florida
- 3:30 p.m. – 3:45 p.m. **BREAK**
- 3:45 p.m. – 5:45 p.m. **HOW TO HELP YOUR PATIENTS STOP SMOKING** *Kevin Ferentz, M.D.* Assistant Professor, Department of Family Medicine, University of Maryland School of Medicine, and *Carmine Valente, Ph.D.*, Deputy Executive Director, Medical and Chirurgical Faculty of Maryland

**Sponsored by Med Chi's Physician Rehabilitation Committee  
in cooperation with the  
Committee on Alcoholism and Chemical Dependency**



## Miscellaneous Meetings

November 1	<b>Emerging Concepts in Diabetes Management</b> , sponsored by Franklin Square Hospital Center and the American Diabetes Association at Marriott's Hunt Valley Inn, Hunt Valley, MD. 5 prescribed hours by the American Academy of Family Physicians. Fee: \$100 physicians; \$80 allied health professionals; \$60 employees of Franklin Square Hospital Center. Info: Staff Development Department, 301-682-7193.
November 16	<b>Addiction: Prevention, Recognition and Treatment</b> , sponsored by the Medical and Chirurgical Faculty of Maryland at the Med Chi Faculty Building, Baltimore, MD. 7 Cat 1 AMA/PRA credits. Fee: \$50 Med Chi members; \$100 physician nonmembers; \$25 allied health professionals; free for students and residents. Info: Vivian Smith, 301-539-0872 or 1-800-492-1056.
November 16	<b>Advanced Medical Technologies: Regional Hospital's Role</b> featuring Denton Cooley MD. Sponsored by Frederick Memorial Hospital at the Holiday Inn, Frederick, MD. 6 Cat 1 AMA/PRA credits. Fee: No charge but participants must register by November 13. Info: Ken Coffey, 301-698-3478.
November 20-22	<b>Managing the Medical Practice of the Nineties</b> , sponsored by Kohler HealthCare Consultants, Inc. at the Radisson Plaza at the Inner Harbor, Baltimore, MD. Fee: \$450; \$375 if both physician and manager attend. Info: Robin Murphy, 301-441-3740.
November 23	<b>The African-American Perspective on Substance Abuse</b> , sponsored by the Monumental City Medical Society and the Baltimore City Health Department at Stouffer Harborplace Hotel, Baltimore, MD. Cat 1 AMA/PRA credits available. Fee: \$75. Info: Evelyn Campbell, 301-396-1229.
December 7-8	<b>Managing Diabetes in the 1990s and the Great Masqueraders - Psychiatric Disorders: Overviews for the Family Physician</b> , sponsored by the Maryland Academy of Family Physicians at the Sheraton Hotel, Wilmington, DE. 6.5 Cat 1 AMA/PRA credits. Fee: \$55 MAFP members; \$80 nonmembers; \$35 paramedicals; Free for residents, medical students, and MAFP retired and life members. Info: Joseph P. Connelly Jr., MD, 301-747-1980
January 24-25, 1992	<b>Performing Arts Medicine: Issues in Diagnosis and Management</b> , sponsored by Med Chi's Committee on Medicine and the Performing Arts, at the Faculty Building, Baltimore, MD. Cat 1 AMA/PRA credits available. Fee: \$50 physicians; \$35 allied health professionals; \$15 musicians and students. Info: Susan Harman, 301-539-0872 or 1-800-492-1056.
February 8, 1992	<b>How to Market Your Medical Practice Without Advertising</b> , at Howard Community College, Columbia, MD. Fee: \$60. Info: Office of Continuing Education, 301-964-4944 or Sheryl Kurland, 301-750-6990.

## Shady Grove Adventist Hospital

9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.

November 7	Medical Malpractice Update
November 14	New Strategies in the Therapy of Rheumatoid Arthritis
November 21	Irritable Bowel Syndrome
December 5	Gastrointestinal Surgery for Severe Obesity
December 12	Holiday Depression
December 19	Ocular Manifestations of Systemic Disease

## Maryland Advertisers!

To advertise in Med Chi Publications contact:

**Network Publications**

**2701 N. Charles Street, Baltimore, MD 21218**

**301-235-0500 FAX 301-235-0689**

## The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education activities for 1991, contact the Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205 (301-955-2959).

<b>November 1-2</b>	<b>Progress in Pediatrics.</b> 11 Cat 1 AMA/PRA credits. Fee: \$140 physicians; \$85 residents, fellows and nurse practitioners.
<b>November 2-3</b>	<b>Hemodynamic Monitoring, Patient Care and Pulmonary Artery Catheterization - A Hands-on Course.</b> 14 Cat 1 AMA/PRA credits. Fee: \$550.
<b>November 4-6</b>	<b>Advanced Pediatric Life Support Courses.</b> 20 Cat 1 AMA/PRA credits; ACEP credits applied for. Fee: \$525.
<b>November 8</b>	<b>Update on Sinusitis for the Practitioner.</b> 9 Cat 1 AMA/PRA credits. Fee: \$150 physicians; \$80 residents, fellows, and allied health professionals.
<b>November 9</b>	<b>2nd Annual Neurology Conference for the Primary Practitioner,</b> at the Harbor Court Hotel, Baltimore, MD. 7 Cat 1 AMA/PRA credits. Fee: \$100 physicians; \$60 residents, fellows, and allied health professionals.
<b>November 15</b>	<b>Management of Diabetic Retinopathy: Application of Guidelines from 1991 ETDRS Publications.</b> 8 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents, fellows, and allied health professionals.
<b>December 12-14</b>	<b>4th Annual Wilmer Institute: Current Concepts in Ophthalmology plus Hands-on Excimer Laser and Phacoemulsification Wet Labs.</b> 20 Cat 1 AMA/PRA credits. Fee: \$300; \$250 those in training.
<b>January 5, 1992</b>	<b>Recent Advances in the Management of Age-related Macular Degeneration: Guidelines from Recent Clinical Trials.</b> 8 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents, fellows and allied health professionals.
<b>January 24-26, 1992</b>	<b>Frontiers in Research and Clinical Management of Asthma and Allergy,</b> at The Johns Hopkins Asthma and Allergy Center, Baltimore, MD. 15 Cat 1 AMA/PRA credits. Fee: \$350 physicians; \$225 residents, fellows and allied health professionals.
<b>January 30 - February 1</b>	<b>Endoscopic Sinus Surgery: Laboratory and Lecture Series.</b> Cat 1 AMA/PRA credit available. Fee: \$1,250 hands-on laboratory course; \$295 lecture series only.
<b>February-April 1992</b>	<b>33rd Annual Postgraduate Institute for Pathologists in Clinical Cytopathology</b> for Board Certified (or qualified) pathologists as a subspecialty residency. 140 Cat 1 AMA/PRA credits for two courses, both of which must be taken. Preregistration must be completed by March 15, 1992. <b>Home Study Course A.</b> Personal reading and microscopic study in preparation for Course B. <b>In-residence, Course B</b> April 6-17, 1992. Concentrated lecture series with intensive laboratory studies.
<b>Continuously throughout the Year</b>	<b>Visiting Preceptorship in Pediatric Critical Care Medicine.</b> Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. <b>Ophthalmic Electrophysiology Technician Training Course.</b> Ongoing one-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. <b>Ophthalmology Grand Rounds.</b> Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. Thursdays, 7:30-9:00 am. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700. <b>Neuro-ophthalmology Conference.</b> Held twice per month. Info: 301-955-5700. <b>Cornea Conference.</b> Held monthly. Info: 301-955-5700. <b>The Department of Radiology and Radiological Sciences</b> offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169. <b>Visiting Physicians.</b> Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500. <b>Johns Hopkins Medical Grand Rounds.</b> Accredited audiovisual continuing education series of case discussions for clinicians; 30 topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988. <b>Microsurgery Training at The Johns Hopkins Hospital.</b> One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.



## University of Maryland

For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

November 6-7	<b>AIDS: A Challenge to Primary Care.</b> 12 Cat 1 AMA/PRA credits. Fee: \$150. Info: 301-328-3767.
November 8	<b>Controversies in Pharmacology and the Elderly</b> , at the Omni International Hotel, Baltimore, MD. Credits and fee to be determined.
November 15	<b>Clinical Neuroimmunology Symposium.</b> 6.5 Cat 1 AMA/PRA credits. Fee: \$100. Info: Kenneth Johnson MD, 301-328-6484.
November 22-24	<b>Update in Adolescent Medicine.</b> 13.5 Cat 1 AMA/PRA credits. Fee: \$75 - \$135. Info: Mary Frances Weber, 301-661-2002.
December 13	<b>Lung Cancer: Current Concepts and Therapies.</b> 6 Cat 1 AMA/PRA credits. Fee: \$25. Info: Carol McNamara, 301-328-2565.
January 24-25, 1992	<b>Laparoscopic Surgery: The Team Approach.</b> 14 Cat 1 AMA/PRA credits. Fee: \$2,500. Info: Pat Rahmiow, 301-321-5481.
Continuously throughout the Year	<p><b>Visiting Professor Program</b> - A new 1991-1992 directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.</p> <p><b>Departmental Rounds and Conferences</b> - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.</p>

## Medical Officer Managers and Staff Computer Workshop

Four evening sessions  
November 4, 5, 6, and 7



**Goucher College**  
Center for Continuing Studies  
Call 337-6200.

**Instructor:** Bruno Mattiello,  
director of computer services of the  
Medical and Chirurgical Faculty  
of Maryland

# Performing Arts Medicine:

*Issues in Diagnosis and Management*

sponsored by:  
Med Chi's Committee on  
Medicine  
and the Performing Arts

January 24-25, 1992  
at

the Med Chi Faculty Building  
1211 Cathedral Street  
Baltimore, Md

CME Credits Available  
For more information  
contact:

Susan Harman  
301-539-0872

Medical  
and Chirurgical Faculty  
of Maryland



## DIRECTOR OF MEDICAL EDUCATION AND MEDICAL AFFAIRS

Prince George's Hospital Center, the 450 bed flagship hospital of Dimensions Health Corporation in Cheverly, Maryland is seeking a physician executive to be a moving force behind our commitment to quality, community and education.

Located in suburban Washington, D.C., the Hospital Center serves a diverse metropolitan community, providing care that includes a Level I Shock Trauma Unit, Comprehensive Cardiology (inclusive of invasive cardiology and open heart surgery), a Level II Neonatal Nursery, and a variety of graduate medical education programs.

The successful candidate will be a board certified physician, with the integrity, maturity, diplomacy and tact needed to be a member of the Hospital Center's senior management staff, acting as liaison between the Medical Staff, Administration, and Board.

Responsibilities include the administration of the office of medical affairs and establishing new directions for the medical education and quality assurance programs. Compensation is competitive and inclusive of a comprehensive salary, clinical income and fringe benefit package.

Candidates ideally will have conducted a community-based medical practice and have a demonstrated record of administrative leadership and clinical accomplishment. Interested applicants should submit a resume and statement of interest by November 15 to:

**Chief Executive Officer**  
**Prince George's Hospital Center**  
3001 Hospital Drive  
Cheverly, Maryland 20785

*Healthcare Above the Standard.*



**PRINCE GEORGE'S HOSPITAL CENTER**

3001 Hospital Drive, Cheverly, Maryland 20785 (301) 618-2264

An affiliate of Dimensions Health Corporation.  
A not-for-profit community health system.



# The experience of a nationwide laboratory.

Wouldn't it be great if you could enjoy all the advantages of a nationally—  
accredited testing laboratory—right here in your own neighborhood?

Well, now you can.

- The nation's largest full-service clinical laboratory network
- Over 25 years experience in laboratory toxicology
- Accredited by the College of American Pathologists (CAP)
- Licensed by the U.S. Department of Health and Human Services



**SmithKline Beecham**  
*Clinical Laboratories*  
*Maryland*

**800-729-7525**

- Local courier network works on your schedule around the clock
- 24-hour turnaround time on most routine tests
- Extensive internal quality control program ensures the accuracy you need to prescribe proper treatment for your patients
- A commitment to serve and serve well.

# The convenience of a local lab.



# COMING OUT OF THE DARK

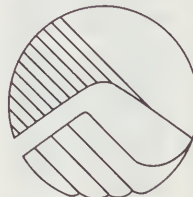
Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians, with a confidential and nondisciplinary focus...Addiction, Marital/Family Conflicts, Psychiatric Illness, Organic Impairment, Physical Handicap...If these problems exist, we can help find the solution. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families.

The Committee is NONDISCIPLINARY and information is kept CONFIDENTIAL. If you, a colleague, or family member is in need of our services call (301)962-5580 or call toll free (800)992-7010, or leave a message 24 hours a day, 7 days a week at (301)727-1020.

*HELPING IS OUR BUSINESS...All donations to the Physician Rehabilitation Committee are used for the delivery of services to Maryland physicians in need of help. If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation, 1204 Maryland Avenue, Baltimore, Maryland 21201 Please note on your donation: "Physician Rehab"*

Medical  
and Chirurgical Faculty  
of Maryland



**Physician  
Rehabilitation  
Committee**



# THE NEW IRS-APPROVED TRUSTS FOR PHYSICIANS

(Summit Bancorporation, Trustee)

(CoreStates Bank, Trustee)

## **\* V.E.B.A. PLAN**

### *FEATURES*

**UNLIMITED TAX DEDUCTIBLE  
CONTRIBUTIONS**

**REGARDLESS OF YOUR  
PENSION SITUATION**

**AND IS NOW**

**IRS APPROVED FOR USE BY DOCTORS  
IN OTHER STATES**

**EVEN IF . . .**

- YOUR PENSION PLAN IS OVER FUNDED
- YOUR PENSION PLAN IS MAXIMUM FUNDED
- YOU HAVE NO PENSION PLAN

\*VOLUNTARY EMPLOYEE BENEFITS ASSOCIATION

---

**PLEASE SEND ME A copy of the I.R.S. "Favorable Letter of Determination"  
and other relevant information on your \*V.E.B.A. Plan**

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

DATE OF BIRTH \_\_\_\_\_ TELEPHONE # (\_\_\_\_) \_\_\_\_\_

Mail to:

**THE KIRWAN COMPANIES  
402 MIDDLETOWN BLVD., SUITE 202  
LANGHORNE, PA 19047**

**(800) 969-7666 ..... (215) 750-7616 ..... FAX (215) 750-7791**

# HARUNDALE OFFICE PARK

- **Newly Renovated**
- **Low Rental Rates**
- **Equity Opportunity**

One mile from North Arundel Hospital

Next to Harundale Mall in Glen Burnie

Outstanding parking ratio of  
9 spaces per 1000 sq. ft.

Custom designed offices

Suites from 550 sq. ft. and up

Elevator Service in both buildings

**Call (301) 995-5544**  
**Corridor Brokerage Services, Inc.**



## Bright Oaks Courtyard

2021 EMMORTON ROAD (RTE. 924) • BEL AIR, MD 21015

### 20,000 Square Ft. Professional Office Buildings

- Easy Access to I-95 & Rt. 24
- Close Proximity to residential & commercial developments
- Customized suites
- HVAC gas, elevators, ample parking
- Competitive rates
- Tenant allowances

**Contact: C.H. Goldberg, MT-(ASCP); CIBN**  
**(301) 893-1800**  
**1-800-437-8558**

Developed by:

**WARD & LAMBDIN**  
REAL ESTATE DEVELOPERS



ROBERT WARD REALTY INC.

## PHYSICIANS:

M.D.'s with general medical, surgical, or Family Practice background to work as urgent care physicians in busy hospital Emergency Department. Part-time/full-time positions available. Competitive salary; flexible hours.

For details, contact: Dan K. Morhaim, M.D.  
Franklin Square Hospital Center  
9000 Franklin Square Drive  
Baltimore, MD 21237  
(301) 682-7046

## Opportunities

to start, assume or join existing Pediatrician, Family Practice or Internal Medicine practice on the Eastern Shore of Maryland. Local Physician owned IPA model, HMO assisting in recruitment efforts to increase availability of Primary Care Physicians. Beautiful area located between the Chesapeake Bay and the Atlantic Ocean; close to Washington D.C. and Baltimore.

Submit Resume to:

Penny Gibson, Director Health Services  
P.O. Box 2410 • Easton, Maryland 21601  
Or Call: 1-800-334-3427, Extension #133

## FULL TIME EMERGENCY PHYSICIAN

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Dr. Anne Salmon Barone  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000



### PHYSICIAN-PSYCHIATRIST

Psychiatrist wanted part-time for private practice group of non-MD mental health professionals. Offices around Balto metro area. Meds consults, brief treatment. Opportunity for growth. Send vita to: Medipsych Services, 3701 Old Court Road, Suite 16, Baltimore, MD 21208 or call Dr. Lisa Shusterman at 486-3710.

### PEDIATRICIAN

Pediatric Group, Baltimore suburb, desires pediatrician for employment, leading to full partnership. Send resumé to Box 9, 9121 Reistertown Road, Owings Mills, MD 21117.

### ORTHOPAEDIC SURGEON

BC/BE to join 4 orthopaedists in a large multispecialty group. Interest and expertise in spine surgery a plus. Extensive support system and modern facility located in Columbia, near the cultural advantages and medical schools of the Baltimore-Washington, DC area. Please send CVs to: Patuxent Medical Group, Inc., 2 Knoll North Drive, Suite 401, Columbia, MD 21045, Attn: Physician Recruiter. EOE/MFHV.

### MEDICAL DIRECTOR MANAGED CARE

Community Health corporation in the Maryland/DC area, serving a low income urban population under a variety of managed care and fee-for-service arrangements, seeks experienced Medical Director. Excellent benefits and competitive salary. An Equal Opportunity Employer. Please submit CV and/or letter of interest to Box 12.

### OPHTHALMOLOGIST

Wanted for Ellicott City office. Equipment provided, flexible terms. Reply to Box 9.

### INTERNIST

BC/BE Internist wanted for established primary care practice. Competitive salary, incentives, full benefits, early partnership. Baltimore/Washington area. Send CV to R. Brimhall MD, 1833-A Forest Dr., Annapolis, MD 21401.

### PHYSICIANS WANTED

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

### PRACTICE FOR SALE

Established internal medicine practice (10 years) for sale in the Highlandtown area. For further information, please call 780-0050.

### FOR SALE

Well-established thriving psychiatric practice for sale in an elegant medical building in Howard County due to retirement. Call 301-465-5260 or 301-461-4455 and leave a message.

### OFFICE AND PRACTICE FOR SALE

Established Family Practice/Office (condo) 1400 sq ft. 1205 York Rd., Lutherville, MD 21093. 410-823-2080.

### OFFICE FOR SALE

Glen Burnie, MD. 1,000 sq ft suitable for 1 or 2 physicians. Near hospital. Adequate private parking. 301-484-2797.

### MEDICAL OFFICE SUITE FOR LEASE/TOWSON

8 rooms, 2 baths in great location. Close to hospitals & public trans. AMY RUTH 301-823-2323/882-4961. O'CONOR, PIPER & FLYNN.

### MEDICAL OFFICE

Suitable for 1 or 2 physicians: St. Mary's County, a rapidly growing semirural area. Contact Leon Berube for details: 997 Old Route Five, Mechanicsville, MD 20659 (301-884-3113).

### EQUIPPED MEDICAL SUITES, LEASE OR SALE

Annapolis, Great Access, Private Parking. Near communities & nursing home. Up to 3,375 SF, first floor. Call Sue Morris 301-647-6983 or 1-800-666-3124. O'Connor, Piper & Flynn Realtors.

### HEALTHCARE REIMBURSEMENT AND OFFICE SERVICES

A Physician Billing Service. 301-465-4706

### MMJ

### Classified Advertising

#### Med Chi Members:

\$5 per line per insertion

#### Physician Nonmembers:

\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment. Ad cancellations must be received in writing seven weeks prior to the first of the month.

Send box replies or new ad copy to: MMJ, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

### MEDICAL LABORATORY FOR SALE

Due to increasingly restrictive Medicare and federal regulations, a group of physicians in the State of Maryland is offering a clinical medical laboratory for sale. Located in Annapolis, MD, the laboratory is a completely independent state-licensed facility with a sizable patient workload. The physicians' group may be willing to trade with a comparable laboratory finding itself in the same position. Please send all inquiries to: Laboratory Manager, Weems Creek Medical Laboratory, Inc., 600 Ridgely Ave., Suite 123, Annapolis, MD 21401.

### MOBILE NUCLEAR MEDICINE

Mobile SPECT services are now available to group practices throughout Maryland. Great way to maximize your revenues! We provide a choice of complete turnkey or specific support services. Contact: Raymond White, Harbor Health Care Group, 1 Harbor Ct., Suite 25-D, Portsmouth, VA 23704. 1-800-373-2556. ■

# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



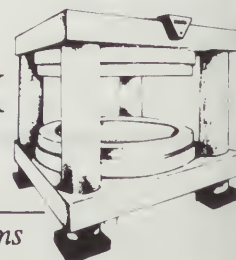
Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS™ MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



ACCESSIBLE MRI of  
BALTIMORE COUNTY, INC.

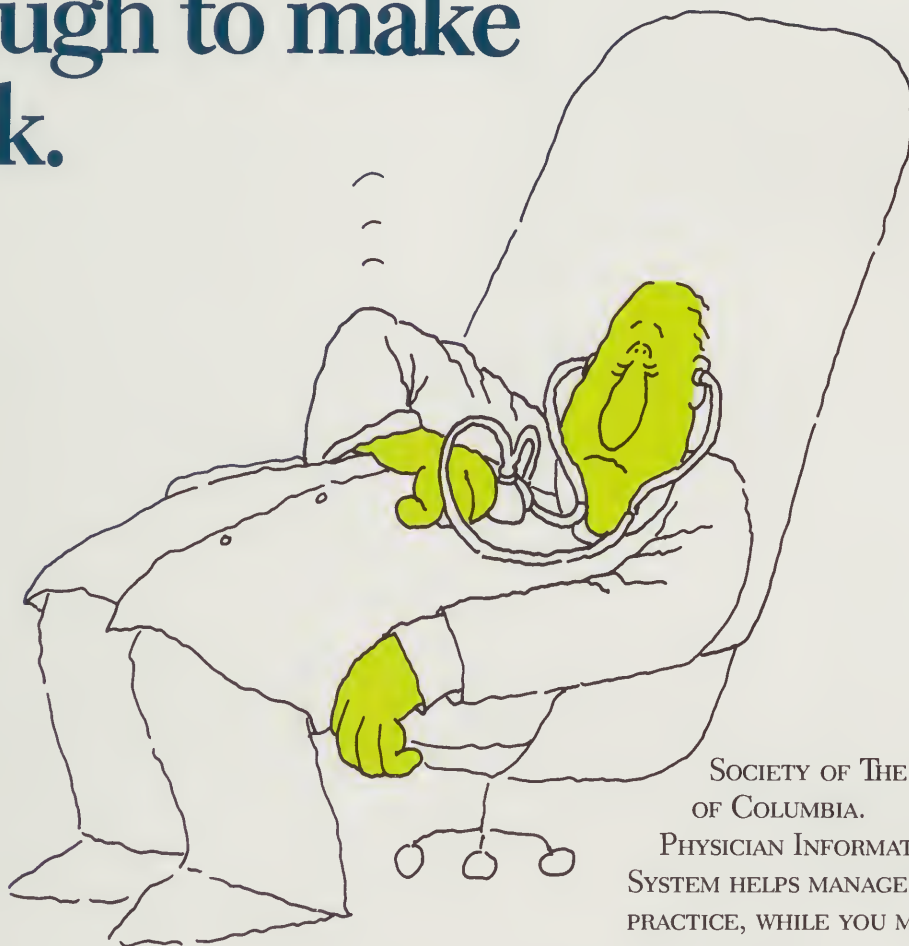
110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



# Competition, HMOs, Insurance and slow-paying patients... it's enough to make you sick.



THE PROBLEMS OF MANAGING A PRACTICE TODAY CAN REALLY MAKE YOU SICK.

EVEN WORSE, THEY CAN MAKE THE BUSINESS END OF YOUR PRACTICE SICK, TOO. THAT'S WHERE WE CAN HELP.

WE'RE CBSI, THE LEADER IN MEDICAL OFFICE AUTOMATION SYSTEMS SINCE 1977. OUR PHYSICIAN INFORMATION SYSTEM SUBMITS YOUR INSURANCE FORMS ELECTRONICALLY, POSTS PAYMENTS AND ADJUSTMENTS AUTOMATICALLY, AND RUSHES YOU COMPLETE, UP-TO-THE-MINUTE PATIENT CLINICAL AND FINANCIAL DATA. CURRENTLY RELIED UPON BY MORE THAN

5,000 PHYSICIANS IN OVER 50 MEDICAL SPECIALTIES AROUND THE AREA. MORE THAN 99% OF THESE SYSTEMS ARE STILL IN USE TODAY BECAUSE THEY'RE FLEXIBLE, ADAPTABLE AND CBSI BACKS THEM WITH UNPARALLELED HARDWARE MAINTENANCE, CUSTOMER SUPPORT AND TRAINING.

SINCE 1981, CBSI CONTINUES TO BE THE ONLY PROVIDER OF MEDICAL OFFICE AUTOMATION ENDORSED BY THE MEDICAL

SOCIETY OF THE DISTRICT OF COLUMBIA.

PHYSICIAN INFORMATION SYSTEM HELPS MANAGE YOUR PRACTICE, WHILE YOU MANAGE YOUR PATIENTS.

CALL 770-2292 RIGHT NOW TO FIND OUT MORE ABOUT PHYSICIAN INFORMATION SYSTEM. IN MARYLAND, CALL TOLL-FREE AT 1-800-638-6364.

# CBSI

COMPUTER BUSINESS SYSTEMS, INC.

**YOUR PRACTICE IS OUR BUSINESS.**

6211 Executive Boulevard,  
Rockville, Maryland 20852  
(301) 770-2292  
1-800-638-6364 in Maryland

An Affiliate Member of MedServ

**ALPHA MICROSYSTEMS**  
RIGHT FROM THE START.

# When you choose Princeton, you're in good company.

“My agent is always on the lookout for me – comparing rates, coverages, and company stability.

He recommended Princeton because it offers *Occurrence Plus* coverage, competitive rates, and it's a leading writer of medical malpractice insurance. I trusted his judgment.”

---

*Dr. William R. Stern*  
*Gastroenterologist, Rockville*

---

The independent agents who represent Princeton put you first.

Rated “A” by Standard & Poor's



Princeton Insurance Company  
4 North Park Drive  
Hunt Valley, MD 21030-1812  
410-785-0900

**More than 1,300  
doctors in Maryland  
and Delaware have  
chosen Princeton for  
their professional  
liability coverage.  
It's easy to switch.**

**Why wait?**



W1 MA76M

NO.12

1991

02-----SEQ: SR0054434

MARYLAND MEDICAL JOURNAL

**Maryland Medical Journal**

DECEMBER 1991

NATIONAL  
LIBRARY

DEC 05 1991

OF  
MEDICINE

3  
NATIONAL LIBRARY OF MEDICINE  
TSD INDEX MEDICUS DIRECT  
8600 ROCKVILLE PIKE  
BETHESDA MD 20894

*University of Maryland  
School of Medicine Dean  
Donald E. Wilson MD:  
His Goals for the Year 2000*

Endorsed by Med Chi  
for Maryland Physicians

©1990 Medical Mutual Liability Insurance Society of Maryland. All rights reserved.



## It's A Closed Box.

Simply put, your Medical Mutual premiums go into a closed box . . . and you own the box. We pay claims, we pay to defend physicians, we pay operating expenses. Any money left over belongs to you. That's it. No money goes to out-of-state owners, no money goes to subsidize operating expenses of a parent company located in another state. Dividends are paid to you, not to outside stockholders.

The physicians of Maryland planned it this way when you asked the Maryland General Assembly to create Medical Mutual to meet your special insurance needs. It's a concept that has worked well for over 15 years, and it's a concept that has made Medical Mutual the choice of the vast majority of physicians across the state.

The closed box. We're the only ones who operate this way. Why accept anything less?

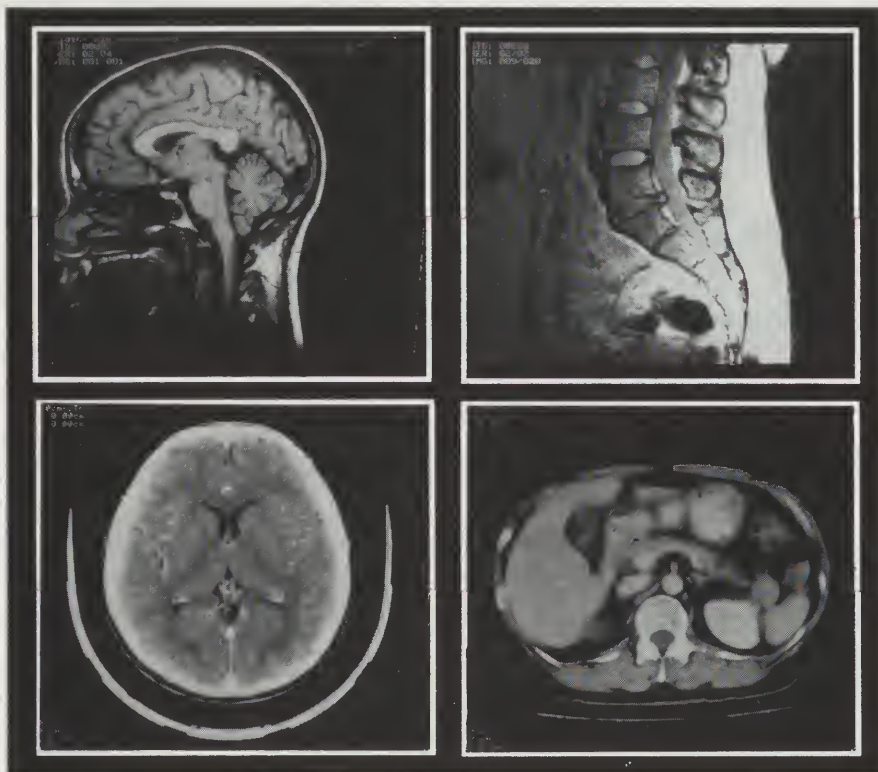


Medical Mutual Liability Insurance Society of Maryland  
225 International Circle • Hunt Valley, Maryland 21030  
Toll Free 1-800-492-0193





# TOWSON IMAGING CENTER



## NOW OPEN!

*(A Local Physician Partnership)*

A FULL SERVICE DIAGNOSTIC CENTER OFFERING STATE-OF-THE-ART EQUIPMENT:

**MRI — G.E. 1.5T Signa Advantage high field strength magnet with  
MR — Angiography**

High resolution images of head, body and musculo-skeletal system.

**CT — G.E. Pace Plus**

Head and whole body imaging.

**RADIOGRAPHY**

- Now taking appointments
- Same Day scheduling
- Same day reporting
- Physician consultation with radiologist available
- Duplicate films provided



**TOWSON  
IMAGING  
CENTER**

1304 Bellona Avenue  
Charles and Beltway  
Lutherville, MD 21093  
Phone: (301) 825-3500  
FAX: (301) 825-3509

*Quality Service to Our Physicians and Patients!*

**Princeton's  
Maryland  
Agents**

Affiliated Financial Services, Inc.  
Columbia, MD (301) 992-0043

Beall, Garner, Screen & Geare  
Cumberland, MD (301) 722-2500

Harry Cohen Insurance Agency, Inc.  
Baltimore, MD (301) 366-3030

Comprehensive Risk Management  
Timonium, MD (301) 560-2424

Consolidated Insurance  
Baltimore, MD (301) 944-9550

Contemporary Insurance Services  
Washington, D.C. (800) 658-8943  
(202) 887-5563

Corroon & Black, Stump, Harvey, C  
Hunt Valley, MD (301) 527-1200  
Bethesda, MD (301) 951-3300

Diversified Insurance Industries  
Baltimore, MD (301) 433-3000

William C. Garrett & Associates  
Towson, MD (800) 458-7295

Hardesty Insurance Services  
Dover, DE (302) 678-9555

The Harjes Agency  
Hunt Valley, MD (301) 785-6161

Ralph W. Lee & Company  
McLean, VA (703) 556-8787

MBS Insurance Services  
Mountain Lakes, NJ (201) 335-2900

Medical Liability Agency, Inc.  
Towson, MD (301) 296-8326

Medical Society of Delaware  
Insurance Services (MSDIS)  
Wilmington, DE (302) 571-0986

Med Net Financial  
Bethesda, MD (301) 961-8861

Onal's Insurance Agency  
Linthicum, MD (301) 859-1990

Reese, Yeatman & Associates, Inc.  
Bethesda, MD (301) 657-9490

Smith, Cropper & Deeley, Inc.  
Willards, MD (301) 835-2000

W.S. Borden Company  
Trenton, NJ (609) 394-5288

Wideman & Co.  
Cherry Hill, NJ (609) 428-0939

Wright-Gardner Insurance, Inc.  
Hagerstown, MD (301) 733-1234

## Making the right choices means asking the right questions.

You know the questions to ask your patients. Questions that will provide the information you need to make an informed decision about medical treatment.

When it comes to choosing a medical malpractice insurer, knowing which questions to ask--and how to interpret the answers--is no less important. Because just as your treatment decisions may have a lasting impact on your patient's long-term health, your choice of insurer may make all the difference to your professional and financial well-being in the years ahead.

In an uncertain medical situation, you might consult a specialist. When you're making decisions about insurance, why not consult with an insurance specialist? An expert who can suggest which

questions to ask, guide you through the technical jargon, and help you select the coverage that's right for you.

That's where Princeton's network of independent insurance agents comes in. Our agents understand the insurance needs of health care professionals. They'll show you how to compare costs and benefits, and help you avoid gaps or duplications in coverage.

Do ask an agent why Princeton should be your choice. Ask about our financial strength, about our claims management philosophy that vigorously defends physicians against meritless claims...and about our new office package policy that offers protection for your practice and premises. We think you'll like the answers.



**Princeton Insurance Company**  
4 North Park Drive  
Hunt Valley, Maryland 21030-1812  
(301) 785-0900



---

# MMJ

## Maryland Medical Journal

---

DECEMBER 1991

VOLUME 40 NO 12

---

### ARTICLES

- Donald E. Wilson MD — Dean of the University of Maryland School of Medicine:  
An Interview with MMJ's Editor . . . . . 1074**

*Betsy Newman*

Dr. Wilson is interested in working with Med Chi to develop relevant continuing medical education (CME) programs for physicians in Baltimore and throughout the state.

- The Use of a Low-level Stage During Exercise Testing in  
Predicting Severe Coronary Disease . . . . . 1079**

*Romulo F. Baltazar MD, FACP, FACC, Albert Grant MD, Vicki O'Mara RN and Mark B. Effron MD*

In a study of eighty-one patients with a positive stress test who underwent coronary angiography, the results showed that a positive test at warm-up or Stage I of the Bruce protocol is usually a sign of severe coronary disease, although patients with less severe disease may also be included.

- Insignificant Blunt Maternal Trauma with Lethal Fetal Outcome: A Case Report . . . . . 1083**

*Islam Sidky MD, Norman H. Daikoku MD and Jay Gopal MD*

We report a case of a twenty-nine-week breech fetus with skull fracture, intracranial bleeding, and liver laceration sustained in a vehicular accident. This case describes insignificant maternal trauma with poor fetal outcome.

### MEDICAL HISTORY

- Dr. Nathaniel Potter: Contributions to Medicine and the University of Maryland . . . . . 1089**

*William S. Potter*

One of the founders of the University of Maryland, Dr. Nathaniel Potter was the school's first Professor of Theory and Practice of Medicine

### MINUTES

- Council Minutes from the Semiannual Meeting . . . . . 1117**  
**House of Delegates Minutes from the Semiannual Meeting . . . . . 1120**

## Editor

Victor R. Hrehorovich MD

## Associate Editor

Henry P. Laughlin MD, ScD, ScSD

## Managing Editor

Janet Campbell MS, MS

## Editorial Board

John W. Buckley MD

DeWitt E. DeLawter MD

Kevin Scott Ferentz MD

Barton J. Gershen MD

Fred J. Heldrich MD

Robert G. Knodell MD

Herbert L. Muncie MD

Carmine M. Valente PhD (Advisory)

## Art Director

Virginia Carter

## Graphic Artist

Susan Ventura

## Communications Assistant

Lori Robinson

## Executive Director

Angelo J. Troisi FACHE

## Communications Director

Michelle Burke MHSA

Copyright © 1991. MMJ Vol 40, No 12. The Maryland Medical Journal USPS 332080. ISSN 0025-4363 is published monthly by the Medical and Chirurgical Faculty of Maryland and is a membership benefit. Subscription rates: U.S. and U.S. possessions, one year: nonmembers \$35; foreign \$42. Single copy: members \$5; nonmembers \$7. Second class postage paid at Baltimore, MD and at additional mailing offices. POSTMASTER: send address changes to Maryland Medical Journal, 1211 Cathedral St., Baltimore, MD 21201-5585. FAX 301-547-0915.

## Advertisers

Contact: Network Publications Corp.

2701 N. Charles St. - Ste. 400

Baltimore, MD 21218

(301-235-0500)

FAX (301-235-0689)

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of Maryland. Publishing an advertisement does not imply endorsement of any product or service offered, or approval of any representation made.



Medical  
and Chirurgical Faculty  
of Maryland

## DEPARTMENTS

Epidemiology and Disease Control Program . . . . .	1059
<i>Occupational Disease Registry and 1990 Annual Report. . .</i>	
Executive Director's Newsletter . . . . .	1067
Commentary . . . . .	1096
<i>Treatment of Sleep Disorders of Older People. . . Mel P. Daly MD</i>	
Maryland Oncology Newsletter . . . . .	1099
<i>Gastric Tumors. . . E. George Elias MD, PhD</i>	
A Clinical Moment with ... Diabetes . . . . .	1101
<i>Alternatives to the Injection of Insulin. . . DeWitt DeLawter MD</i>	
Auxiliary . . . . .	1104
<i>Holiday Sharing. . .</i>	
Board of Physician Quality Assurance Actions . . . . .	1106

## MISCELLANY

Letters to the Editor . . . . .	1063
<i>Medicine and Public Health in Baltimore During the Early Years of the Sinai Hospital of Baltimore . . . Albert B. Sabin MD</i>	
<i>Authors Take Heart. . . Joseph Miller MD</i>	
Performing Arts Medicine Conference . . . . .	1094
Doctor of the Day . . . . .	1103
Information for Authors . . . . .	1108
Word Rounds . . . . .	1109
<i>Eponyms II. . . Bart Gershen MD</i>	
Medical Miscellany . . . . .	1111
<i>The State of Medicine in the Soviet Union. . . Theodore E. Harrison MD, MBA, FACEP</i>	
CME Programs . . . . .	1131
Physician Recognition Award . . . . .	1132
Statement of Ownership . . . . .	1134
Classified Ads . . . . .	1136
MMJ Annual Index . . . . .	1138
Annual Meeting . . . . .	1149

Donald E. Wilson MD, the new dean of the University of Maryland School of Medicine, discusses his goals for the year 2000 with Editor Victor R. Hrehorovich MD in the cover article found on page 1074.

Cover photo by Norbert Bertling



# Maryland's newest physical rehab center already has 20 years experience.



Baltimore is a city known internationally for its outstanding medical care. Now the tradition continues with the addition of the new Maryland General-Bryn Mawr Rehab Center at Maryland General Hospital. This specialty center for physical medicine and rehabilitation offers Bryn Mawr Rehab's 20 years of experience and leadership in the field of rehabilitation medicine.

The partnership between Maryland General Hospital and Bryn Mawr Rehab is truly unique. For the first time in Maryland, two high quality institutions with long histories of health care achievement are coming together to make a major commitment to rehabilitation medicine.

The Maryland General-Bryn Mawr Rehab Center, the region's most modern and conveniently located rehabilitation facility, provides a continuum of care in physical and cognitive rehabilitation services

including brain injury, stroke, orthopedics, arthritis, amputee services and multiple sclerosis, among others.

Most importantly, everyone on the Maryland General-Bryn Mawr Rehab team is personally and professionally dedicated to helping patients reach their highest level of independence. Our guiding philosophy is team-centered care, focused upon the individual needs of our patients and their families. This is what makes Maryland General-Bryn Mawr Rehab Center a very special place for rehabilitation care.

To learn more about Maryland General-Bryn Mawr Rehab Center or to arrange a tour, please call Mary Filippelli our administrative director at (301) 225-8380.

Maryland General-Bryn Mawr Rehab Center.  
We're the new team in town with lots of experience.

 **MARYLAND GENERAL  
BRYN MAWR REHAB CENTER**

827 Linden Avenue, Baltimore, Maryland 21201 (301) 225-8380



The recommended starting dose for Calan SR is 180 mg once daily. Dose titration will be required in some patients to achieve blood pressure control.

A lower initial starting dosage of 120 mg/day may be warranted in some patients (eg, the elderly, patients of small stature).

Constipation, which is easily managed in most patients, is the most commonly reported side effect of Calan SR.

#### BRIEF SUMMARY

**Contraindications:** Severe LV dysfunction (see *Warnings*), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block (if no pacemaker is present), atrial flutter/fibrillation with an accessory bypass tract (eg, WPW or LGL syndromes), hypersensitivity to verapamil.

**Warnings:** Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

**Precautions:** Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdose. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol and propranolol clearance may occur when either drug is administered concomitantly with verapamil. A variable effect has been seen with combined use of atenolol. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Verapamil may inhibit the clearance and increase the plasma levels of theophylline. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

**Adverse Reactions:** Constipation (7.3%), dizziness (3.3%), nausea (2.7%), hypotension (2.5%), headache (2.2%), edema (1.9%), CHF, pulmonary edema (1.8%), fatigue (1.7%), dyspnea (1.4%), bradycardia: HR < 50/min (1.4%), AV block: total 1°, 2°, 3° (1.2%), 2° and 3° (0.8%), rash (1.2%), flushing (0.6%), elevated liver enzymes, reversible non-obstructive paralytic ileus. The following reactions, reported in 1.0% or less of patients, occurred under conditions where a causal relationship is uncertain: angina pectoris, atrioventricular dissociation, chest pain, claudication, myocardial infarction, palpitations, purpura (vasculitis), syncope, diarrhea, dry mouth, gastrointestinal distress, gingival hyperplasia, ecchymosis or bruising, cerebrovascular accident, confusion, equilibrium disorders, insomnia, muscle cramps, paresthesia, psychotic symptoms, shakiness, somnolence, arthralgia and rash, exanthema, hair loss, hyperkeratosis, macules, sweating, urticaria, Stevens-Johnson syndrome, erythema multiforme, blurred vision, gynecomastia, galactorrhea/hyperprolactinemia, increased urination, spotty menstruation, impotence.

4/11/91 • P91CA6143V

Address medical inquiries to:  
G.D. Searle & Co.  
Medical & Scientific  
Information Department  
4901 Searle Parkway  
Skokie, IL 60077

**SEARLE**

G.D. Searle & Co.  
Box 5110, Chicago, IL 60680

A91CA6148T

When diet and exercise alone are not enough...



ONCE DAILY 180mg Calan SR Verapamil HCl 180mg SUSTAINED-RELEASE CAPLETS

© 1991, G.D. Searle & Co

A MILD START IN MILD HYPERTENSION



## With Malpractice Insurance Premiums on the rise, why settle for anything less than the best available coverage?

The downward trend in malpractice insurance premiums has broken and prices are on their way back up. Should a physician choose between insurers only on price? Of course not. But there are a number of quality choices between carriers and products. You should get the most from your premium dollars.

Let us compare the available products and prices for you. There is no charge or obligation. For written quotations and comparisons call us or send us a copy of your malpractice policy. Let us show you why hundreds of Maryland physicians rely on us for their malpractice coverage. You need a broker you can rely on.

### Contemporary Insurance Services

1000 Connecticut Avenue, N.W., Suite 1112, Washington, D.C. 20036

(202) 887-5563 • Toll Free 1-800-658-8943

FAX (202) 452-6093

## THE CENTRAL MARYLAND

# SURGERY CENTER

- + Convenient Location
- + Pre Op Tours & Teaching
- + Staff Highly Skilled/Sensitive
- + Flexible, Accomodating Schedule
- + Operating Room Turnover Time—8-10 Minutes
- + Comfortable Environment
- + Quality Care/Reasonable Cost/Medicare Approved
- + Efficient/Convenient Personalized Service for Physicians and Patients

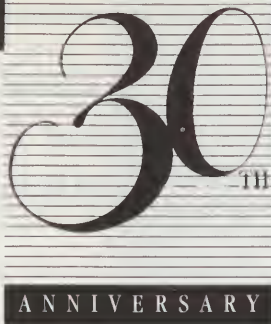


*Where  
Caring  
is the  
State of  
Things*

+ For More Information, Please Call:

1500 Joh Ave., Balto., MD 21227

(301) 536-0012



# Drs. Schultze, Snider & Associates, P.A.

Diplomates of the American Board of Radiology  
and American Board of Nuclear Medicine  
celebrating 30 years of service to the Baltimore community



*Magnetic Resonance Imaging • CAT Scanning*  
*Nuclear Medicine & Nuclear Cardiology*  
*Radiation Oncology • Interventional Radiology*  
*Ultrasound • General X-ray and Fluoroscopy*  
*Low Dose Mammography • Breast Needle Localization*

DRS.  
SCHULTZE,  
SNIDER  
&  
ASSOCIATES,  
P.A.

RADIOLOGISTS

OWINGS MILLS, Imaging Center 363-6677

OWINGS MILLS, Mammography and Ultrasound Center 363-0767

LUTHERVILLE/TOWSON, 296-6222

LUTHERVILLE/TIMONIUM, Magnetic Resonance Imaging Center 561-4674

Opening Fall 1991, GREENSPRING/PIMLICO, The Medical Office Building (at Sinai Hospital) 367-8588

GREENSPRING/PIMLICO, Professional Building and Imaging Center (at Children's Hospital) 462-6700

HOMEWOOD, South Professional Building (at Union Memorial Hospital) 467-1905

THE UNION MEMORIAL HOSPITAL/THE CHILDREN'S HOSPITAL & CENTER FOR RECONSTRUCTIVE SURGERY/SINAI HOSPITAL OF BALTIMORE



William Donald Schaefer - Governor of Maryland



Nelson J. Sabatini - Secretary  
Department of Health & Mental Hygiene

J. Mehser Joseph, PhD - Director  
Community Health Surveillance & Laboratories Admin.

Ebenezer Israel, MD, MPH- Director  
Epidemiology & Disease Control Program

## EPIDEMIOLOGY & DISEASE CONTROL PROGRAM

201 W. Preston Street, Baltimore, Maryland 21201 (301)225-6700

**December, 1991**

### **Occupational Disease Registry and 1990 Annual Report Maryland Department of the Environment**

#### **History and Development**

Occupational diseases have been reportable in Maryland since 1912. In previous years, the Department of Health and Mental Hygiene (DHMH) received these reports through its confidential morbidity reporting system, which was mainly used for communicable diseases. Government reorganization on July 1, 1987, gave the responsibility for the occupational disease reporting system to the Maryland Department of the Environment (MDE). The law requires that physicians who believe that patients under their care have an occupational disease shall submit a report to the MDE. These reports must include the patient's name, address, occupation, and place of employment; identify the suspected disease; and contain other pertinent information as needed. MDE is required to give the information received under this action to the Commissioner of Labor and Industry (Environment Article, Section 6-702 Annotated Code of Maryland).

In 1990, MDE developed a new confidential occupational disease reporting card (MDE-223, Figure 1). This new card and the guidelines (found on the last page of this article) were sent to over 300 physicians and occupational health facilities across the state. As

a result of these efforts, reporting has significantly improved. The physician-based Occupational Disease Registry is maintained by the MDE's Environmental Health Program, Health Registries Division.

#### **Reporting Procedures and Actions**

MDE's Occupational Disease Registry has been set up to monitor workers' exposure to working conditions/substances that may adversely affect their health. Conditions with short latency periods (e.g., occupational asthma, and heavy metal and pesticide poisoning) are of particular importance, since they are amenable to preventive and/or corrective action.

These cases are promptly referred to Maryland Occupational Safety and Health (MOSH) for worksite investigation. Reports on employees of the federal government are referred to the Occupational Safety and Health Administration (OSHA). Consultative services are available for self-employed workers through MOSH, MDE and/or private consulting firms.

Conditions with long latency periods which are not responsive to corrective action, (e.g., asbestosis) are monitored to determine the ex-

#### **Pneumococcal Vaccine:**

**Remember to immunize those 65 years and over, and those with chronic illness**

Figure 1.

ID#										MARYLAND CONFIDENTIAL OCCUPATIONAL DISEASE REPORT									
NAME OF PATIENT: Last			First			Middle			DATE OF BIRTH MONTH DAY YEAR			M <input type="checkbox"/> F <input type="checkbox"/>		WHITE <input type="checkbox"/> BLACK <input type="checkbox"/> ASIAN <input type="checkbox"/>		HISPANIC <input type="checkbox"/> OTHER <input type="checkbox"/> UNKNOWN <input type="checkbox"/>			
ADDRESS						ZIP CODE						COUNTY				TELEPHONE			
EMPLOYER						ADDRESS													
JOB TITLE						DEPT. / WORK LOCALE						EXPOSURE: TYPE / DURATION							
CHIEF COMPLAINT															DATE OF ONSET				
SUSPECTED DISEASE / ILLNESS (Specify)															CLINICAL / LABORATORY FINDINGS (Specify)				
Please Check <input checked="" type="checkbox"/>															X-RAY <input type="checkbox"/>				
RESPIRATORY <input type="checkbox"/>															BLOOD <input type="checkbox"/>				
CANCER (OCCUP.) <input type="checkbox"/>															URINE <input type="checkbox"/>				
TOXICS-RELATED <input type="checkbox"/>															OTHER <input type="checkbox"/>				
PHYSICAL HAZARDS <input type="checkbox"/>															DATE OF DIAGNOSIS				
OTHER <input type="checkbox"/>																			
COMMENTS																			
HOSPITALIZATION NO <input type="checkbox"/> YES <input type="checkbox"/>				HOSPITAL						OUTCOME Survived <input type="checkbox"/> Died <input type="checkbox"/> Date									
REPORTED BY						ADDRESS						TELEPHONE				DATE OF REPORT			

MDE 223 REV 5-90

Send to: Maryland Department of the Environment, Health Registries Division, Rm. 2121  
2500 Broening Highway, Baltimore, Maryland 21224. Telephone (301) 631-3851

tent of the problem and to evaluate the effectiveness of control measures over time. All reported cases are maintained in a computerized database for trend analysis and periodic summarization.

### Highlights: 1990 Reports

In 1990, MDE received 133 reports of occupational diseases (Table 1).

All but one reported case were male; 69% were white. Ages ranged from 23-84 years, with a median of 58 years.

Baltimore City and the surrounding counties of Anne Arundel, Baltimore, and Prince George's accounted for 88 (66.2%) cases.

Asbestos-related conditions were the most frequently reported, accounting for 97 (72.9%) cases. Forty-seven (48.5%) of these cases were reported from Primary Metal Industries. There were 14 (10.5%) reports of lead poisoning, 12 of which were from the Construction industry.

The most frequently reported occupations were welders and cutters (20 cases), laborers

(17 cases), machine operators (13 cases) and plumbers (8 cases). More than 85% of these cases involved asbestos-related jobs.

*Submitted by Maryland Department of the Environment, Health Registries Division*

*Season's Greetings*



Table 1. Characteristics of Reported Cases of Occupational Diseases

Characteristic		Total	Asbestos-Related	Cancer	Lead Poisoning	Other <sup>1</sup>
Total		133	97	5	14	17
Age						
18-24		1			1	
25-34		5			4	1
35-44		17	6		7	4
45-54		23	12	1	2	8
55-64		39	33	2		4
65 +		48	46	2		
Sex						
Male		132	96	5	14	17
Female		1	1			
Race						
White		92	65	3	8	16
Black		36	32	2	1	1
Other/Unk .		5			5	
Worksite Region						
Western MD		14				14
Central MD		88	67	5	13	3
Out of state/Unk.		31	30		1	
Occupation						
Electrician		6	6			
Plumber		8	8			
Machine Operator		13	13			
Welder		20	13	1	6	
Laborer <sup>2</sup>		17	16			1
Other <sup>2</sup>		69	41	4	8	16
(SIC <sup>3</sup> )	Industry					
Construction						
(15)	General Contractors	1			1	
(16)	Heavy Construction	1			1	
(17)	Special Trade Contractors	18	8		10	
Subtotal		20	8		12	
Manufacturing						
(26)	Paper and Allied Products	16	2			14
(27)	Printing and Publishing Industries	1				1
(28)	Chemicals and Allied Products	6	1	5		
(32)	Stone, Clay, Glass, and Concrete	5	5			
(33)	Primary Metal Industries	48	47		1	
(34)	Fabricated Metal Products <sup>4</sup>	2	1		1	
(35)	Industrial/Commercial Equipment	1	1			
(37)	Transportation Equipment	14	12			2
Subtotal		93	69	5	2	17
Transportation, Gas, Elec. and Sanitary						
(44)	Water Transportation	2	2			
Services						
(82)	Educational Services	1	1			
Public Administration						
(91)	Exec., Legis., and Gen. Gov't.	1	1			
(95)	Adm. Environ. Qual. and Hous. Prog.	1	1			
(96)	Adm. Economic Programs	4	4			
(97)	Nat'l Secur. and Int'l. Affairs	4	4			
Subtotal		10	10			
Unknown <sup>5</sup>		7	7			

1 Includes hearing loss (5 cases), carpal tunnel syndrome (5), contact dermatitis (3), occupational asthma (2), conjunctivitis due to solvent exposure (1) and neuropathy (1)  
2 Includes 32 occupations, each with 1 to 5 case reports  
3 Standard Industrial Classification Code, 1987  
4 Not including machine and transportation equipment  
5 Includes cases with unknown employer and self-employed with > 1 occupational activity

# MARYLAND DEPARTMENT OF THE ENVIRONMENT

## OCCUPATIONAL DISEASE REPORTING GUIDELINES

Government reorganization on July 1, 1987 gave the statutory authority for the surveillance of occupational diseases and receipt of reports to the Maryland Department of the Environment (MDE). These data are made available to the Maryland Department of Health and Mental Hygiene and Commissioner of Labor and Industry as required by law.

### 1. Who should report ?

Environment Article, 6-702 requires that physicians who believe that patients under their care have an *occupational disease* shall submit a report to the MDE. A designated member of the staff may also report, but the physician retains the legal responsibility.

### 2. How should reports be made ?

The confidential occupational disease reporting card (MDE-223) should be used for all reports. Additional cards are available upon request. A log format is also available for physicians with large caseloads.

### 3. When should reports be made?

Reports should be made upon diagnosis, even if the onset of the condition or exposure to the toxic substance occurred several years earlier.

### 4. What is an occupational disease?

An occupational disease is any illness or adverse health condition which is caused by or worsened by working conditions.

### 5. What are examples of occupational disease?

It is important that all occupational diseases be reported so that areas of risk can be properly identified. The following are of particular interest to the MDE because they are more amenable to preventive and corrective action:

**Respiratory :** asbestosis, silicosis, other pneumoconioses, and occupational asthma.

**Occupational-related cancer :** leukemia, mesothelioma, and bladder cancer.

**Toxics-related :** adverse health effects associated with heavy metals, pesticides, hazardous chemicals.

**Physical hazards :** adverse health effects associated with heat, cold, radiation, noise.

**Other conditions :** such as blood dyscrasia and gas intoxication.

### 6. What is the responsibility of company physicians?

When a physician is employed by a company, his/her first duty is the protection of the worker's health. The physician, and not the company, carries the legal responsibility to report. This ethical and legal responsibility supersedes any considerations of the physician's relationship to the company.

### 7. What is the purpose of occupational disease reporting?

Prompt, accurate occupational disease reporting will alert public health authorities to unsatisfactory conditions in the workplace. Data received are referred to Maryland Occupational Safety and Health (MOSH) for follow-up. Early identification of problems with subsequent corrective action will prevent further adverse health effects in the exposed worker as well as protect other workers at risk.

### 8. What other services are available to the physician through the MDE ?

The Department offers the following services that may be of benefit to you:

- toxicological and medical information
- occupational medicine referral sources for case management
- periodic reports and updates on occupational health issues
- feedback and follow-up on reported cases
- sponsorship of continuing medical education credits on environmental/occupational health topics.

**For further information and to obtain reporting cards contact:**

Maryland Department of the Environment  
Environmental Health Program; Health Registries Division  
2500 Broening Highway, Room 2121  
Baltimore MD 21224  
Telephone: (410) 631-3851



## Medicine and Public Health in Baltimore During the Early Years of the Sinai Hospital of Baltimore\*

The Sinai Hospital of Baltimore is a unique private institution of which the Jewish community of Baltimore can be justly proud — from the moment the cornerstone was laid 125 years ago for the ten-bed Hebrew Hospital, to its transformation sixty years later (1926) into the nonsectarian Sinai Hospital, and finally to its evolution into an outstanding academic hospital (1952). An institution designed to meet the needs of the Jewish population as well as other Baltimore citizens, it has consistently continued to improve.

Although my own career in medical research began sixty-four years ago while I was still a student in New York City, my activities have never before brought me in contact with the Sinai Hospital of Baltimore. Accordingly, I was somewhat surprised to be invited to be the keynote speaker for the celebration of the 125th Anniversary of its founding. Could it be because my ancestors wandered in the Sinai Desert about 3,200 years ago? Or because forty-eight years ago, I crossed the Sinai Desert from Egypt to Tel Aviv in a jeep in eight hours as a U.S. Army Medical Officer engaged in research on epidemic diseases in the Middle East during World War II? Or could it be because I had recently come to know Dr. Bart Chernow, Physician-in-Chief at the Sinai Hospital of Baltimore? In any case, I accepted the invitation with pleasure, and thereby learned some interesting things, which I would like to share with you, about the history of Baltimore and of its special medical problems during the past 125 years.

From a June 1966 publication of the Women's Auxiliary of Sinai Hospital, I learned about the Baltimore of the mid-nineteenth century. In 1850, Baltimore had a population of 169,000, which by 1866, only a year after the tragic war between the states (I came to use this expression for the Civil War during my eight years of residence in South Carolina), had increased to 300,000. This rapid growth of population was partly the result of immigration from the war-ravaged southern states and partly due to immigration from Europe through Baltimore's fine natural port. A great deal of overseas commerce in foreign ships brought with them smallpox, cholera, yellow fever, malaria, and typhus. "The city, which had been laid out in typical, colonial fashion, with its cobblestone or brick paving, was building more and more row houses, and behind them tiny dwellings to accommodate the Negro newcomers to town . . . Disease in the city, both homegrown and imported, was rampant. Open sewers ran along the curbs, every backyard had a cesspool, and everything emptied into Jones' Falls. The city's water supply came from an artificial lake in Greenspring Valley, and all wastes from the valley emptied into this lake. Consequently, Baltimore had one of the highest typhoid rates of any big city in

the country . . . Philanthropic visionaries were there, too, and from them grew many public services and works such as the Hebrew Benevolent Society and, ultimately, Sinai Hospital."

From a publication by Joseph Gordon entitled *Public Health and the Conquest of Disease in Baltimore . . . 1792 - 1968*, I learned that in 1868, when the Hebrew Hospital first opened its ten beds for indigent patients, tuberculosis was a leading cause of death, along with hundreds of stillbirths, infant deaths from unknown causes, and more than 1,000 deaths per year from cholera infantum. In addition, epidemics of measles, cholera, croup, dysentery, scarlet fever, typhoid, and endemic lobar pneumonia took their toll of life and added to the misery of the living. In 1900, infant mortality in the United States was higher than it is now in most poverty-stricken, economically underdeveloped countries — 160 of every 1,000 liveborn children died before their first birthday and the figures were more than double for black children (over 320 per 1,000). A child born in the United States in 1900 had an average life expectancy of only forty-seven years, compared with about seventy-five at the present time.

From an article entitled "Medicine in Maryland, 1634 - 1900" by Douglas Gordon Carroll, Jr., I learned something about the evolution of medical education in Maryland and what medical practice was like in Baltimore 125 years ago. Before the nineteenth century, most physicians and surgeons in practice in Maryland were trained in the medical schools of Europe. In 1812, when an apprenticeship of a single student with a single doctor was still the most frequent method of medical education, the University of Maryland was created. It recognized Medicine as an intellectual discipline, similar to Law and the Divinity. However, medical education remained a cottage industry with many so-called medical schools that were no more than trade schools.

In 1877, the new *Maryland Medical Journal* had an article by Richard McSherry in which he described medical practice as follows: "The practitioner thought that when he knew something about anatomy, chemistry, and a few drugs, he was able to practice medicine. He could bleed, cup, draw teeth, set broken limbs, and deliver a farmer's wife of triplets. It soon became apparent that some had special gifts for surgery, others in obstetrics. After Laennec's discovery (of the stethoscope), some became more skilled in diseases of the chest. Dr. Bright (1789-1858) opened a new field, and some practitioners grew famous in the knowledge of diseases of the urinary organs." Dr. McSherry concluded with the following prophetic statement: "Specialties have become inevitable."

From the previously mentioned publication by Joseph Gordon, I also learned that:

1. Baltimore had the oldest existing health department in

\*Part of Keynote address at Academic Session for 125th anniversary of the Sinai Hospital of Baltimore, April 27, 1991

the US. It was established in 1792 to prevent the spread of yellow fever from Philadelphia to Baltimore.

2. During the nineteenth century, "the major focus of health department services was concentrated mainly on the sanitation of the environment and prevention of communicable disease by vaccination and quarantine, as the science of the day permitted."
3. In 1890, "Baltimore witnessed the rapid acceptance of the germ theory of disease."
4. By 1900, Baltimore achieved control over malaria and yellow fever by "Improvement of drainage and elimination of standing water in streets, gutters, alleys and cellars." Cholera came under control by "upgrading environmental conditions, the water supply, and the control of insects (flies) and human wastes."
5. "The first two decades of the twentieth century witnessed three fundamental improvements that contributed greatly to Baltimore's health. These were the

establishment of a pure water supply, creation of an adequate sewage disposal system, and the enactment of a strong milk ordinance."

Thus, many of the challenges of poor health in Baltimore were being gradually overcome in the first part of the twentieth century not so much by the increase in knowledge of infectious diseases provided by medical science or by improved medical education, as by a gradual improvement in the standard of living and the associated improvements in nutrition, sanitation, hygiene, and housing.

### Acknowledgments

I want to thank Margaret Kaiser of the National Library of Medicine for locating the historical publications on the Sinai Hospital and on medicine in Baltimore in the nineteenth century and for supplying them to me.

ALBERT B. SABIN MD  
Washington, DC

### Authors Take Heart

Authors naturally desire to share their thoughts about a particular subject with their readers. In any setting, their efforts are frequently rejected by editors but yet the writers persist. Juvenal<sup>1</sup> recognized the presence of this pernicious yet innocuous syndrome early on when he wrote in one of his satires:

Yet we still keep at it, ploughing a dusty furrow,  
Turning the barren sand. You can't get out, you're hooked  
By writer's itch. The craving for bookish renown  
Becomes a sick obsession.

Then, Abelard<sup>2</sup> said it a little differently to Heloise:

Against the disease of writing one must take special precautions, since it is a dangerous and contagious disease.

I wonder how discouraged Edgar Allan Poe and Richard Bach were when their efforts were rejected. Poe suffered a unanimous refusal of *The Raven* by his editors and only saw his work in print in a periodical of which he was the editor.<sup>3</sup>

Nearer to this day, *Jonathan Livingston Seagull* was returned to Bach more than twenty times before acceptance and a place on the bestseller list.<sup>4</sup> So, depressed authors, take heart, raise the dust, live with your disease, and keep sending your best efforts to the editors. If your work has merit, you will see it in print.

### References

1. Juvenal. *The Sixteen Satires*. Translated by Green P. Hammondsworth: Penguin Books, Ltd. 1967; 320.
2. Scott-Moncrieff KC. *The Letters of Abelard and Heloise*. New York: Alfred A. Knopf. 1942; 364.
3. Mankowitz W. *The Extraordinary Mr. Poe*. New York: Summit Books. 1970; 248.
4. Bauer S, Moss RF. Feeling rejected? Join Updike, Mailer, Oates. *The New York Times Book Review*. July 21, 1985; 1, 29-30.

JOSEPH M. MILLER MD  
Timonium

**Gynecare Center**  
**Abortion**



General Anesthesia & Local Anesthesia  
**FREE Pregnancy Tests (8 AM-12 NOON)**  
**SONOGRAMS • BIRTH CONTROL SERVICES**  
**AIDS TESTING • FEMALE STERILIZATION**

Patriot's Plaza, 8055 Ritchie Hwy, Suite 204, Pasadena, MD



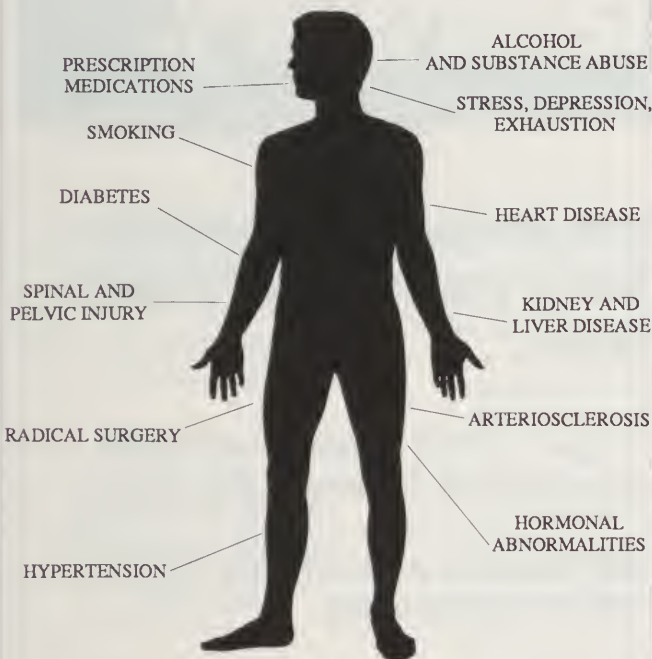
IMMEDIATE CONFIDENTIAL HELP

**761-4774**

TOLL FREE 1-800-548-5062



# Impotence: Whatever The Cause...



## We Have The Treatment.

- Counseling
- Drug-Injection Therapy
- Mechanical Devices
- Medications
- Prosthesis
- Revascularization

Maryland's first health center dedicated solely to the comprehensive diagnosis and treatment of impotence. Physicians and patients now have an answer.



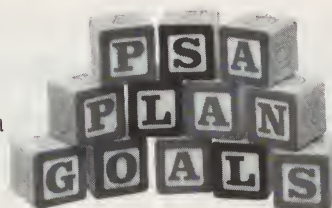
1104 Kenilworth Drive • Suite 406  
Baltimore, MD 21204

**1-301-296-MRIC**  
**1-800-955-MRIC**

When it comes to building your financial future, you can't afford to settle for second best. That's why more and more of your colleagues are turning to PSA Financial Center for a full spectrum of financial, risk management, and investment counseling services designed expressly for the medical profession.

Our seven affiliate companies, both individually and as a team, have worked closely with over

## WE PUT IT ALL TOGETHER FOR YOU.



1,400 doctors, surgeons and support personnel to provide superior solutions to almost every kind of financial need and objective – regardless of its complexity.

The result is a level of experience, expertise, and proven performance that has made us a leader in all of our fields. Not to mention a powerful reason to give us a call today. At PSA, we put it all together for you. Let us show you exactly how.

PSA Professional Liability, Inc.  
*Malpractice Insurance*

PSA Financial, Inc.  
*Employee Benefits*

PSA Financial Advisors, Inc.  
*Financial Planning*



**PSA Financial Center**  
North Charles St. & The Beltway  
1300 Bellona Avenue  
Lutherville, Maryland 21093  
301-296-PLAN / 301-821-7766  
1-800-677-7887

PSA Capital Management, Inc.  
*Investment Management*

PSA Pension Services, Inc.  
*Design & Administration*

PSA Insurance, Inc.  
*Agents & Brokers*

PSA Equities, Inc.  
*Broker / Dealer*

**PLANNING FOR OUR CLIENTS FINANCIAL FUTURE**

## FRIENDS SCHOOL OF BALTIMORE

**PRE-PRIMARY & LOWER SCHOOL**  
has expanded. Our bright new facilities allow for smaller homerooms and even more personalized attention.

**MIDDLE SCHOOL** concentrates on developing individual potential and self-esteem, while preparing students to take their place as world citizens.

**UPPER SCHOOL** offers students challenging academics and a complete sports program. In recent years, 30% of Friends seniors have been recognized for their outstanding achievement by the National Merit Scholarship Corporation.

## ADMISSIONS TESTING

**Saturday, January 11  
8:30 a.m. - 11:45 a.m.**

*Program begins promptly.*  
**(410) 435-2800**

## A BEAUTIFUL ALTERNATIVE TO NURSING HOME CARE



990 Waterford Drive, Frederick, Maryland  
**(301) 663-9500**

# The experience of a nationwide laboratory.

Wouldn't it be great if you could enjoy all the advantages of a nationally—  
accredited testing laboratory—right here in your own neighborhood?  
Well, now you can.

- The nation's largest full-service clinical laboratory network
- Local courier network works on your schedule around the clock
- Over 25 years experience in laboratory toxicology
- 24-hour turnaround time on most routine tests
- Accredited by the College of American Pathologists (CAP)
- Extensive internal quality control program ensures the accuracy you need to prescribe proper treatment for your patients
- Licensed by the U.S. Department of Health and Human Services
- A commitment to serve and serve well



**SmithKline Beecham**  
*Clinical Laboratories*  
*Maryland*

**800-729-7525**

# The convenience of a local lab.



# Executive Director's Newsletter

December 1991

## Committee Selection Cards 1992-1993

Med Chi members interested in serving on a Med Chi Committee during the 1992-1993 committee year should complete the committee selection card following this newsletter. All members must complete this card to be considered for appointment.

## Revised Disclosure of Ownership Sign for HMO Participating Physicians

In the September 1991 issue of the *MMJ*, Med Chi published a sign for display in physician offices to help its members comply with a new Maryland law (HO, Sec. 1-206). This law requires physicians to post a notice in their offices regarding their ownership of other health care services to which the physicians refer patients. On the sign published in September 1991, it was not indicated that health maintenance organization (HMO) physicians and subscribers are exempt from the disclosure requirement. To help avoid confusion among your HMO patients, Med Chi is providing a revised sign following this newsletter which indicates that HMO patients must use the facility identified by their HMO.

## Japanese Medical Delegation Visits Med Chi

The Japanese President of the Kanagawa Prefecture Medical Association, Ryohei Kawaguchi MD, and Med Chi President J. David Nagel MD signed an agreement for cooperation, friendship and exchange between Med Chi and the Kanagawa Prefecture Medical Association during the Japanese medical delegation's visit to Med Chi on October 15, 1991. During the visit, over 20 physicians and dentists from the Kanagawa Prefecture met to discuss Maryland's medical system, including information on liability insurance and medical licensure. The agreement and the Kanagawa Prefecture flag, which was presented to Med Chi in honor of this event, are on display in the Med Chi Faculty Building.

## Med Chi Issues and Programs Packets Available

Med Chi is developing packets of information on key medical issues. To date, the following issue and program packets have been adopted or are in the developmental stages:

AIDS	Animal Rights
Council and Executive Committee	Doctor/Lawyer/Teacher Partnership Against
Highlights (May 1990 to May 1991	Drugs Training Packet
and May 1991 to September 1991)	Mammography Standards
Medicaid Provider Fee Project	Medicare - Notice of Proposed Rule Making (NPRM)
Physician Rehabilitation	X-ray Assistants

For a copy of any of the completed information packets, call Med Chi's Communication's Department at 301-539-0872 or 1-800-492-1056.

## Audio Cassette on Safe Harbor Regulations

Med Chi physicians who missed the Emergency Conference on Safe Harbor Regulations on October 11, 1991, can order cassette tapes and working materials from the conference. To order the tapes, see the form following this newsletter.

## Certification of Medical Radiation Technologists and Nuclear Medical Technologists

Physicians are reminded that the Board of Physician Quality Assurance (BPQA) anticipates that the enforcement date of Regulations .01-.11 under COMAR 10.32.10, Certification of Medical Radiation Technologists and Nuclear Medicine Technologists, will be January 2, 1992.

This means that non-physicians may not practice medical radiation technology or nuclear medical technology unless certified or temporarily certified by the BPQA by January 2, 1992. The BPQA in consultation with Med Chi and the Maryland Radiology Society is still required by law to develop a method by which non-certified personnel may continue to take x-rays in a physician's office. The results of work now ongoing will be presented to the Senate Finance Committee and the House Environmental Matters Committee on or before December 1, 1991.

---

## *Mandatory Testing of Health Care Workers*

---

In November, Med Chi began its campaign to educate and reinforce legislators' knowledge of HIV transmission. The campaign consists of three letters that contain information from a study conducted by the Med Chi Committee on AIDS on the implications of the Governor's plan to mandate HIV testing for health care workers. This study includes data that show the low risk of transmission of HIV from physician to patient, projected costs of a mandatory testing program, and several other negative aspects of the proposal.

These letters, which are intended to show the deep concern that Maryland physicians have for the problem of mandatory HIV testing, are being mailed as follows:

Letter #1	- The real risk of HIV transmission	- November
Letter #2	- Projected costs of mandatory HIV testing	- December
Letter #3	- Other arguments against mandatory testing	- January

The letters are also being adapted for use as editorials in various area newspapers. Med Chi physicians are encouraged to write to their Maryland legislators and urge them to oppose mandatory testing of HIV. For a copy of the letters being sent to legislators, contact your component medical society or Betsy Newman, Med Chi Public Relations Director, at 301-539-0872 or 1-800-492-1056.

---

## *President's Regional Conference - Eastern Shore*

---

A Med Chi President's Regional Conference for physicians on the Eastern Shore was held on November 14, 1991 at the Blue Crab restaurant in Cambridge, Maryland. During the conference, Med Chi President J. David Nagel MD presented an update of Med Chi activities; Montgomery County Medical Society President Herman C. Maganzini MD reviewed the AMA's Health Access America proposal; and Richard S. Adler MD gave a CME presentation on "Panic Disorder - A Practical Overview." Med Chi thanks Paul A. Stagg MD who served as Eastern Regional Coordinator for this meeting.

---

## *President's Regional Con- ferences - Southern Md.*

---

The President's Regional Conference for southern Maryland is scheduled for early March 1992. Watch the Executive Director's Newsletter for more information about these conferences or contact Betsy Newman, Public Relations Director, at 301-539-0872 or 1-800-492-1056.

---

## *Doctor/Lawyer/ Teacher Partnership*

---

Physicians in Baltimore City and Harford County are urgently needed to prevent drug abuse in Maryland's school children. As a physician volunteer in the Doctor/Lawyer/Teacher Partnership Against Drugs, physicians will spend a few hours of their time to visit a classroom of students and discuss medical dangers of using drugs. Training sessions will be held on Tuesday, January 14 and Wednesday, January 22, 1992 from 6 to 8 pm in the Med Chi Faculty Building for physicians interested in participating in this program. To volunteer or for more information, contact Betsy Newman, Public Relations Director, at 301-539-0872 or 1-800-492-1056.

---

## *Total Support for H.R. 3070*

---

The physicians in Maryland are to be congratulated. Because of your efforts, all eight Maryland U.S. Representatives have become cosponsors of H.R. 3070. This bill, which was introduced by Representative Pete Stark (D-Cal.), would impose a legislative solution that will achieve all of medicine's basic objectives on the conversion factor. Furthermore, the bill sends a strong message to the Health Care Financing Administration (HCFA) that its conversion factor proposals are unacceptable.

This is the first time that all eight Maryland U.S. Representatives have joined forces on an issue that means so much to the citizens and physicians of Maryland. On behalf of Maryland's physicians, Med Chi expresses its sincere appreciation to our state Representatives for their efforts to assure that physician payment reform is implemented in the way Congress intended.

---

## *Annual Meeting*

---

Med Chi's 1992 Annual Meeting will be held Thursday-Saturday, April 30 - May 2, at the Omni International Hotel in Baltimore. AMA Trustee Thomas R. Reardon MD recently accepted Med Chi's invitation to be a featured speaker at the meeting. Watch the Executive Director's Newsletter for more meeting and program information.



---

## Performing Arts Medicine Conference

---

---

## Recent HMO Billing Developments

---

"Performing Arts Medicine: Issues in Diagnosis and Management," a conference sponsored by Med Chi's Committee on Medicine and the Performing Arts will be held January 24-25 in the Med Chi Faculty Building. For more information about this conference, contact Susan Harman at 301-539-0872 or 1-800-492-1056. Information and a registration form are on pages 1094-1095 of this MMJ.

Physicians should be aware of recent developments in the law that impact on their ability to collect payments for services to members of health maintenance organizations (HMOs). Particular problems have arisen when the physician is not under contract with the HMO, but provides services to HMO members on a referral basis. Since physicians are not allowed to bill HMO members directly, they must deal only with the HMO, which may attempt to delay or deny full payment.

Since 1989, health care providers have been prohibited from collecting or attempting to collect from HMO enrollees any money owed to the provider for "any covered services to the enrollee or subscriber."<sup>1</sup> A new law, which became effective July 1, 1991, requires the HMO to pay the provider for services to an enrollee when pre-authorized or referred by the HMO or a participating provider. Should the enrollee be liable for any of the charges, the HMO may then seek reimbursement from its enrollee.

One aspect of the new law has caused a great deal of confusion since it went into effect. An HMO is now required to pay the provider promptly "at the rate billed or at the usual, customary, and reasonable rate."<sup>2</sup> The option to pay at the usual and customary rate (UCR) has been interpreted by some HMOs to allow payment at a rate that is significantly lower than the amount billed by the provider. The Maryland Insurance Division has notified HMOs that it is "not acceptable to limit the [UCR] to the rate which is negotiated between the HMO and the HMO's providers."<sup>3</sup> By definition, the rate that an HMO pays its participating providers is a rate which is discounted from the customary charge. The Insurance Division has told HMOs to "cease such practice immediately [and] make the necessary adjustments to any provider's bills which have been reduced through this action."<sup>3</sup>

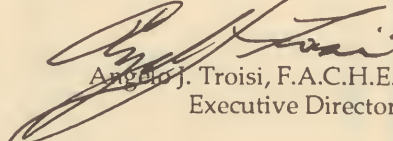
Since some HMOs have seized upon the apparent ambiguity in the law to reduce payments to providers, legislation may be necessary to clarify that the provider should be paid at his or her usual or customary rate. In the meantime, however, physicians and others may be required to take some HMOs to court in order to collect their fees. Some physicians are preparing claims and have retained legal counsel to collect what is owed under a breach of contract theory. Referral of a patient or authorization for care may be considered a direct oral or written contract for services between the HMO and the physician under which the HMO implicitly agrees to pay the provider's charge in return for services to an enrollee. Where an HMO arbitrarily reduces the amount of the fees to the provider, the HMO may have breached its agreement and a court may hold the HMO liable for the full charge. For more information, call Med Chi's Legal Department at 301-539-0872 or 1-800-492-1056.

---

## President's Letter on the Credentialing Process

---

Following this newsletter is a letter from Med Chi President J. David Nagel MD that describes the history of Healthcare Credentials Verification, Inc. and its efforts to streamline the credentialing process. It also dispells some rumors concerning the application process. For questions about this or the credentialing process, contact Betsy Newman, Public Relations Director, at 301-539-0872 or 1-800-492-1056.



Angelo J. Troisi, F.A.C.H.E.  
Executive Director

1. Health - General Article, §19-710.1 (n), Annotated Code of Maryland.
2. Health - General Article, §19-710.1 (b) (1) (ii) 2., Annotated Code of Maryland.
3. Letter from Associate Commissioner Philip L. Wickenden to the president of all HMOs, dated August 1991.

# The President's Letter

Prepared by the President of the Medical and Chirurgical Faculty of Maryland as a service to its members



Medical  
and Chirurgical Faculty  
of Maryland

November 5, 1991

Dear Colleague:

The Med Chi Faculty is strongly committed to providing a service to the physicians of Maryland through Healthcare Credentials Verification, Inc. (HCV).

HCV is a not-for-profit joint initiative created by Med Chi and the Maryland Hospital Association (MHA) to help physicians and hospitals be in compliance with the 1988 law mandating an expanded, more complex medical staff credentialing process. It has become the first statewide cooperative effort of its kind in the nation — one which may become a national model reflecting very favorably on our state's physicians and health care facilities.

Because HCV is recognized as a medical review organization under Maryland law, its files and records cannot be subpoenaed for use in professional liability cases. By using HCV, a physician's appointment or reappointment to a hospital's medical staff can be accomplished quickly and economically in a confidential manner.

Rumors have been circulated that the HCV processing of applications has been fraught with many unnecessary delays. It is true that recently, physicians did not submit applications in a prompt manner as anticipated, but instead waited until the deadline submission date which created a large backlog of applications. It was through the cooperative efforts of Med Chi and the MHA that this backlog was rapidly reduced and the process returned to normal.

It is my pleasure to report that HCV is operating in an efficient manner, that our working relationship with the MHA is strong and productive, and that Maryland physicians and Med Chi can point with pride to being part of an innovation that is helping to ensure the quality of care we provide to our patients.

HCV stands ready to answer any questions you may have on this subject and to meet with local medical societies, specialty groups and others. Your support of this extremely worthwhile endeavor through your cooperation and prompt response to HCV correspondence is very much appreciated.

Sincerely,

A handwritten signature in dark ink, appearing to be "J. David Nagel", written over a horizontal line.

J. David Nagel MD  
President



# TO MY PATIENTS

When I refer you to a specific health care facility for medical tests or services, you may go to that facility or any other\* to have the tests or services completed. As you make this decision, I want you to know that I or members of my immediate family own a business interest in the following health care facilities:

---

Please feel free to ask me any questions you may have about your care. I am always interested in your continued good health.

---

Physician's Signature

\* (unless you belong to an HMO and your plan requires that you use a particular facility.)





## ***MARYLAND LAW REGARDING NOTICE OF OWNERSHIP OF OTHER HEALTH CARE SERVICES***

Effective July 1, 1991, Maryland law requires physicians to post a notice in their offices regarding their ownership of other health care services to which the physician refers patients. (see back)

The law, which is outlined in Section 1-206 of the Health Occupations Article of the Annotated Code of Maryland, states in part:

A health care practitioner may refer a patient or direct an employee of the practitioner to refer a patient to a health care service in which the practitioner, the practitioner's immediate family, or the practitioner in combination with the practitioner's immediate family owns a significant beneficial interest, if prior to the referral the practitioner:

- (I) Except if an oral referral is made by telephone, provides the patient with a written statement that:
  - 1. Discloses the existence of the ownership of the significant beneficial interest;
  - 2. States that the patient may choose to obtain the health care service from another provider of the health care service; and
  - 3. Requires the patient to acknowledge in writing receipt of the statement;
- (II) Except if an oral referral is made by telephone, inserts in the medical record of the patient a copy of the written acknowledgement;
- (III) Displays a written notice that is plainly visible to the patients of the practitioner disclosing all of the health care services:
  - 1. In which the practitioner, the practitioner's immediate family, or the practitioner in combination with the practitioner's immediate family owns a significant beneficial interest; and
  - 2. To which the practitioner refers patients; and
- (IV) Documents in the medical record of the patient that:
  - 1. A valid medical need exists for the referral; and
  - 2. The practitioner has disclosed the existence of the significant beneficial interest to the patient.







Conference proceedings on tape



# How to Structure Health Care Joint Ventures Under the Safe Harbors

Get expert guidance to comply with the Safe Harbor regs on physician investments in the convenience of your home, car or office. Find out how to...

- ✓ Determine fair market value in equipment and lease contracts
- ✓ Structure joint ventures that meet strict new legal tests
- ✓ Meet the "60-40" investment and revenue requirements
- ✓ Assess the impact of Maryland Senate bill 169
- ✓ And much, much more...


Dear Med Chi Member,

Don't panic about the new restrictions on physician investments -- prepare. Get down-to-earth guidance on what the regs require and how to comply from two of the nation's most respected health care attorneys.

Med Chi members save \$25 on the six audio cassette tapes from our top-rated Emergency Conference on the Safe Harbors. Plus, you get working materials, a copy of the Final Safe Harbor regulations and a FREE bonus tape (see below).

You won't find better guidance on joint venture law anywhere. Our speakers have years of experience advising providers on the ins and outs of anti-kickback law -- and they speak in plain English. After listening to these tapes, you'll understand how the safe harbor regs work and how they affect your business arrangements.

Complete and return the Request Form on the the reverse to get proven, practical answers to your Safe Harbor questions.

 **Medical and Chirurgical Faculty of Maryland**

## Special bonus for Med Chi members!

Get the audio cassettes from the Emergency Conference on the Safe Harbors and receive this FREE extra tape -- "The Enforcement Agency Speaks Out."

Jim Cottos, the Regional Inspector General in Atlanta, tells what types of physician joint ventures HHS will -- and will not -- investigate. Get straightforward answers from this candid enforcement official, and a true sense of the government's intent behind anti-kickback legislation.



More details on reverse ►

# The Safe Harbor audio cassettes include all this....

## Listen to leading health care attorneys explain in plain English how to:

- ✓ Qualify for Safe Harbor exemptions
- ✓ Meet the 60%-40% ownership & revenue tests
- ✓ Identify permissible self-referral arrangements
- ✓ Restructure existing joint ventures to comply with the regs
- ✓ Write space, equipment rental and personal service contracts that pass strict legal tests
- ✓ Accept supplier discounts legally
- ✓ Evaluate new investment opportunities for possible Medicare kickback challenges
- ✓ Assess fair-market value accurately
- ✓ And much, much more

## Get practical approaches to put together safe, profitable joint ventures from these pros

Craig Holden, a partner with the Baltimore office of Ober, Kaler, Grimes & Shriver, represents providers in all areas of the health care industry. From 1983 through 1987, he was a trial attorney with the Inspector General Division, Office of the General Counsel, Department of Health and Human Services.

Sanford Teplitzky, also with Ober, Kaler, Grimes & Shriver, has more than 14 years' experience in health law. While with the Dept. of Health, Education and Welfare, Mr. Teplitzky developed policies to implement anti-fraud legislation. He is the author of "Avoiding Fraud and Abuse Problems in Joint Ventures" (*Health Span*).

## The Anti-kickback Statute & the Safe Harbors

There are 11 Safe Harbors -- how many must you meet? Find out. This plain-English explanation of how the Safe Harbors were developed will put anti-kickback enforcement into perspective for you.

## New investment interest and revenue tests

Get a clearer understanding of these most important -- and most confusing -- Safe Harbors. Find out which of your investors the government says are in a position to "make or influence" referrals. Take home ways to structure limited partner buyouts to meet the 40% ownership test. Then, find out how to calculate revenue percentages to monitor compliance with the 40% revenue requirement.

## The Impact of Maryland Senate bill 169

Steve Buckingham, Med Chi's general counsel, clarifies how new state regulations on patient referrals affect your business dealings. Find out how to comply with ownership disclosure rules, and what new challenges lie ahead.

## Fair market value, group practice sales & more

Discover how the Safe Harbors define fair market value for equipment and space leases, how to assess the value of intangibles like practice goodwill and ensure all your financial arrangements fall within the borders of the new rules. You'll get expert strategies and "bright-line" tests to assess current contracts and ensure opportunities are safe.

## Question & answer period

During the final hour of the seminar, Mr. Holden and Mr. Teplitzky answered questions about the Safe Harbors and their impact on specific types of health care business ventures. Benefit from their revealing answers and down-to-earth advice.

## SAFE HARBORS AUDIO-CASSETTE TAPES REQUEST FORM

☒ **YES!** Send me the cassette tapes and the working materials from the **Emergency Conference on the Safe Harbors** cosponsored by Med Chi and Medicare Compliance Alert. I am enclosing payment at the special rate for Med Chi members.


Name \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Area Code/Telephone \_\_\_\_\_

 **For fastest service, call Julie or Robyn toll-free at 1-800-487-4824 ext. 684 and charge to a major credit card.**

**One complete set:** 7 audio-cassettes, a copy of the Final Safe Harbor regulations & more than 150 pages of conference working materials:

\$150

**Less Med Chi member discount:**

- \$25

**Total enclosed (includes S&H):**

\$125

☐ My check, made payable to United Communications Group (TIN 521130564) is enclosed.

☐ Charge my: ☐ Visa ☐ Mastercard ☐ AmEx.  
(Charges will appear as United Communications Group.)

Card # \_\_\_\_\_

Valid Date \_\_\_\_\_ Exp. Date \_\_\_\_\_

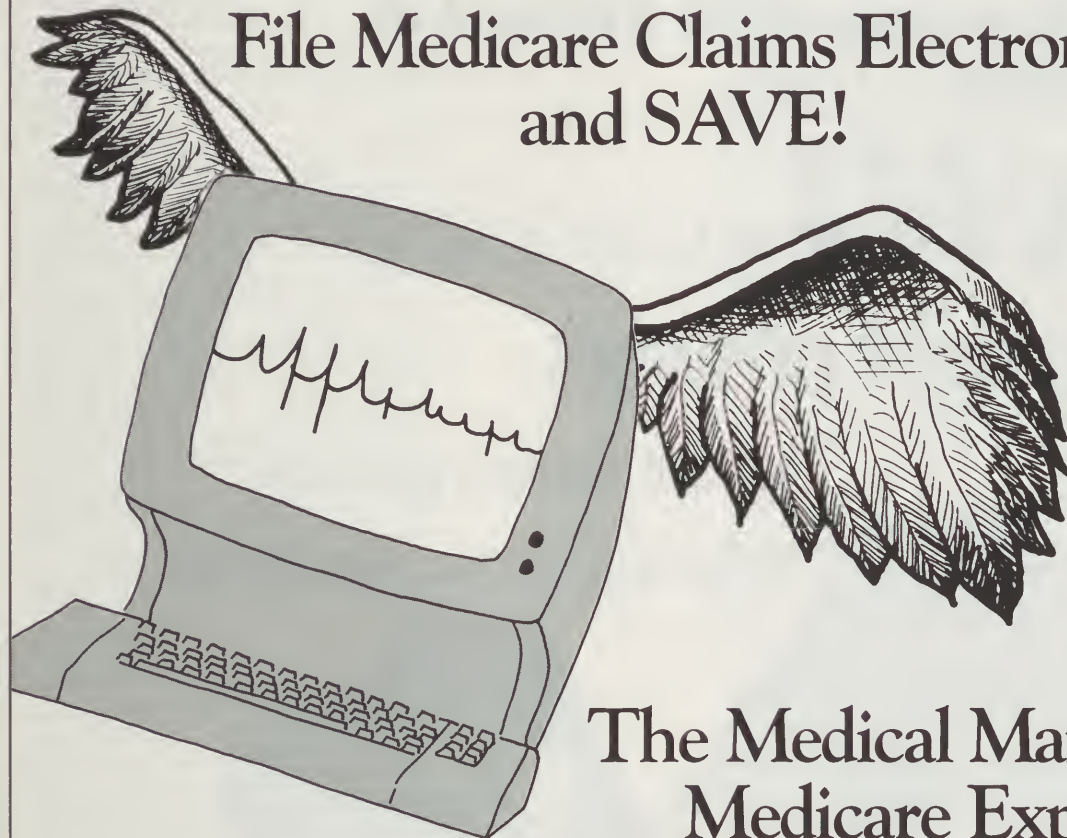
Signature \_\_\_\_\_

**Mail this form to:** Conference Tapes / 11300 Rockville Pike / Suite 1100 / Rockville, MD 20852-3030

**Fax:** 301-816-8945



# File Medicare Claims Electronically... and SAVE!



## The Medical Manager<sup>®</sup>— Medicare Express

This computer hardware/software system is specifically designed for those who haven't felt a need to automate...except for the electronic filing of Medicare claims.

Pay only \$195 per month, for your choice of:

- Lease, on a 3-year contract
- Lease, with option to buy
- Lease, with option to upgrade at any time
- Lease, and convert to a full system of The Medical Manager.

System purchase plan also available.

For a detailed description of the options, call toll free or contact your nearest PRISM office.

**CALL TOLL FREE**  
**1-(800) 776-2454**



Baltimore, MD  
(301) 494-0992

Fairfax, VA  
(703) 359-0777

Richmond, VA  
(804) 330-9225

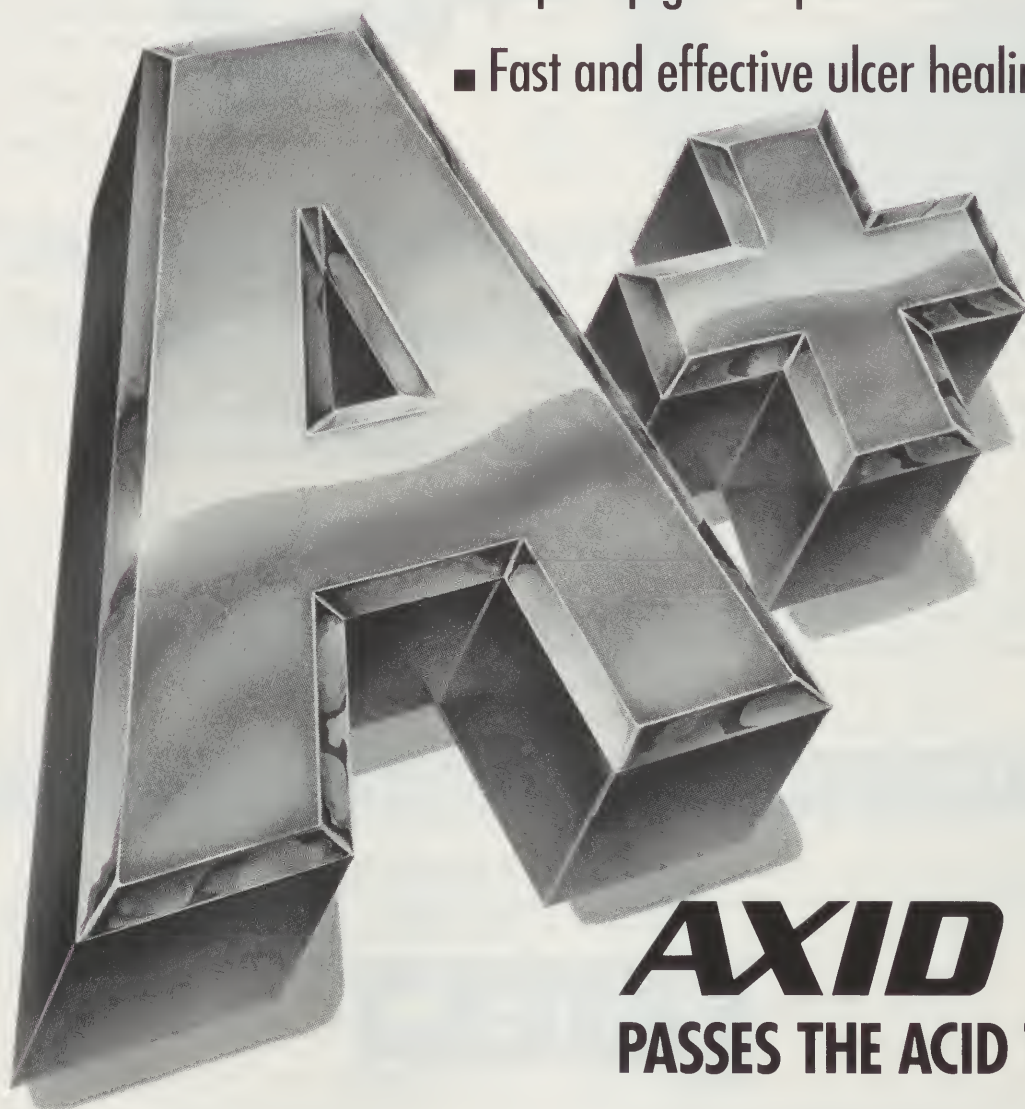
The Medical Manager<sup>®</sup> is marketed nationally by Systems Plus, Inc., a California corporation.  
Systems Plus, Inc. is a registered trademark of Systems Plus, Inc. The Medical Manager<sup>®</sup> is a registered trademark of Personalized Programming, Inc.

For excellent response in the treatment of  
duodenal ulcers...

**AXID**<sup>®</sup> nizatidine

has the right answers

- Rapid epigastric pain relief<sup>1,2\*</sup>
- Fast and effective ulcer healing<sup>2,3,4</sup>



**AXID**  
**PASSES THE ACID TEST**

\*Most patients experience pain relief with the first dose.  
See adjacent page for references and brief summary  
of prescribing information.

NZ-2943-B-149347

© 1991, ELI LILLY AND COMPANY



## AXID<sup>®</sup> (nizatidine capsules)

**Brief Summary. Consult the package insert for complete prescribing information.**  
**Indications and Usage:** 1. *Active duodenal ulcer*—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

2. *Maintenance therapy*—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than 1 year are not known.

**Contraindications:** Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H<sub>2</sub>-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H<sub>2</sub>-receptor antagonists.

**Precautions:** *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

**Laboratory Tests**—False-positive tests for urobilinogen with Multistix<sup>®</sup> may occur during therapy.

**Drug Interactions**—No interactions have been observed with theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

**Carcinogenesis, Mutagenesis, Impairment of Fertility**—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 60 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

**Pregnancy—Teratogenic Effects—Pregnancy Category C**—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Nursing Mothers**—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

**Pediatric Use**—Safety and effectiveness in children have not been established.

**Use in Elderly Patients**—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

**Adverse Reactions:** Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,800 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

**Hepatic**—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

**Cardiovascular**—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

**CNS**—Rare cases of reversible mental confusion have been reported.

**Endocrine**—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

**Hematologic**—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H<sub>2</sub>-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

**Integumentary**—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

**Hypersensitivity**—As with other H<sub>2</sub>-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

**Other**—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

**Overdosage:** Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

PV 2091 AMP  
[091190]

### References

1. Data on file, Lilly Research Laboratories.
2. *Scand J Gastroenterol*. 1987;22(suppl 136):61-70.
3. *Scand J Gastroenterol*. 1987;22(suppl 136):47-55.
4. *Am J Gastroenterol*. 1989;84:769-774.

NZ-2943-B-149347

Additional information available to the profession on request.



**Eli Lilly and Company**  
Indianapolis, Indiana  
46285

# Succeed In The 90's With



## Computerized Medical Records

Did you know that most doctors spend about 40% of their time recording and trying to decipher patient histories from traditional Medical Charts?

Smart Chart's unique software package affords quick and easy access to medical records.

By using Smart Chart, you will have more time to...

- See patients
- Conduct research
- Enjoy yourself!

Call Smart Chart, Inc. today and see how easy it is to *Succeed in the 90's with Smart Chart!*

**MAIL OR FAX THIS COUPON TO:**  
**Smart Chart, Inc.**

11212 Grandview Avenue, Suite 108  
Wheaton, Maryland 20902  
1-800-783-7825

301-946-7825 (Metro. D.C.)  
Fax 301-762-2831

**YES! I am interested in Smart Chart.**

Name \_\_\_\_\_

Company \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

---

# Donald E. Wilson MD

## Dean of the University of Maryland School of Medicine:

### An Interview with MMJ's Editor

---

**Betsy Newman**

---

*Ms. Newman is Director of Public Relations, Medical and Chirurgical Faculty of Maryland, Baltimore, MD.*

**T**o hear the innovative ideas Dean Donald E. Wilson MD has planned for the University of Maryland School of Medicine, you have to make an appointment with the pocket-size computer that is his constant companion. The computer not only illustrates Dr. Wilson's busy schedule, but also symbolizes the progressive thinking he hopes will lead the medical school into the next century.

"This is a very exciting place to be. There's no question about it," says Dr. Wilson during a recent interview with *Maryland Medical Journal* (MMJ) editor, Victor H. Hrehorovich MD. "I'm interested in looking at what needs to be done for the 21st century and I'm willing to take some risks to make the University of Maryland better."

#### Goals for the Year 2000

Dr. Wilson, who became dean of the medical school in September 1991, accepted the position because it offers many challenges: "I saw the medical school as a forward-moving, well-respected urban university interested in developing an excellent staff for education and research. At the same time, the medical school was also very responsive to the community."

Education, research and community programs are at the top of Dr. Wilson's pocket computer agenda. In the coming months, he plans to consult with other school officials to develop a vision for the medical school — a plan for the year 2000. This plan will encompass creative changes in curriculum, research, and community interaction. Although the plan is not expected to be complete until next summer, Dr. Wilson is optimistic that the university will favor his ideas.

#### Revising the Curriculum

"I want to take a fresh look at the curriculum," says Dr. Wilson, who believes the medical school should change its approach to education. In the new curriculum, students would focus on practical problem-solving rather than on tests and lectures. "I want to see if we can make doctors rather than people who memorize things," he explains. "Students need to be taught how to *think*. Resources will always be available to obtain factual information."

---

*Dr. Wilson is interested in working with Med Chi to develop relevant continuing medical education (CME) programs for physicians in Baltimore and throughout the state.*

---



"One thing I hear a lot of from medical students is that they hate medical school for the first two years," he remarks. "They hate medical school because they don't see the **relevance** of what they're doing. While they're memorizing facts, listening to lectures, and taking exams, they wonder what this has to do with being a physician." Dr. Wilson's multidisciplinary approach would have medical students interact with patients during their first two years, to make it more analogous to actual medical practice.

"I also think the curriculum should be more responsive to community needs," says Dr. Wilson. It makes little sense for me to produce people who can tell me about molecular biology and cloning but can't tell me anything about nutrition or preventive medicine." Dr. Wilson also believes that, "we have to very quickly and dramatically increase the amount and quality of computer technology here in order to facilitate progress and patient care."

### Research

In addition to education and clinical care, Dr. Wilson maintains that research is an equally important component of the medical school and is essential to medical advances. In fact, he has transferred his own medical lab from New York to Maryland. However, he also wants to be sure that researchers don't lose sight of what they are doing research for — to improve health care.

While serving as chairman of the Department of Medicine at the State University of New York (SUNY) Health Science Center at Brooklyn, he insisted that researchers spend at least one month a year seeing patients and teaching on the wards so that they would not lose sight of the relevance of their work to patient care. Even at Maryland, Dr. Wilson plans to keep on seeing patients himself.

In fiscal year 91, the University of Maryland School of Medicine had the highest increase in research funding of any state university. Despite this increase, the University of Maryland as a whole is in a budget crisis. Having lost nearly 12 percent of its state-supported budget over the past two years, the School of Medicine anticipates additional state budget cutbacks in the coming year. State budgetary support is vital for the school's operating costs and for continuing expansion. "I knew that Maryland had some difficulties financially, but not to this extent," comments Dr. Wilson.

### Wanted: Space

He explains that the school is in need of a new health science facility which is unattainable within the current budget. Without another 80,000 square feet of space, Dr. Wilson projects that it will be difficult for the school to conduct classes in small groups or recruit additional investigators with research grants.



**Figure 1.** Med Chi President J. David Nagel MD (l) presents Dr. Wilson with a copy of Med Chi's Bylaws. As dean of the University of Maryland School of Medicine, Dr. Wilson is a member of Med Chi's Council.

This lack of space also affects the quality of research and the financial status of the medical school. For example, he describes, "A researcher at another institution who likes the atmosphere of the University of Maryland, may have six or seven million dollars in grants that he's willing to bring to Baltimore. This researcher may have fourteen people working for him and need 4,000 square feet of space. We can't compete for that researcher and his grants because we don't have the space. Up to this point, research growth has been phenomenal, but we can't continue to grow without space."

In addition, there are about 95 faculty members who currently do not have offices at the University. "As renovations occur, we are playing dominos with the staff," says Dr. Wilson. Unless a new structure is built, Dr. Wilson does not foresee an increase in laboratory facilities or teaching faculty.

Dr. Wilson explains he is currently evaluating a computer study conducted over the past three years that depicts the medical school's use of space based on the number of staff, amount of grant money, and other factors. In a few months, he intends to reallocate some of the school's space to insure it is being used efficaciously.

### Community Interaction

Once adequate research and teaching space are obtained, Dr. Wilson wants the medical school to initiate more studies that incorporate community needs. For example, a study relevant to Baltimore City would examine the problems of high infant mortality and low birth weight. Such research might not only reveal factors that cause low birth weight and high mortality but might show ways to prevent these problems. "It's much easier to prevent disease than it is to treat," asserts Dr. Wilson adding, "The medical school needs





**Figure 2.** Donald E. Wilson MD hopes to implement many innovative ideas during his tenure as dean of the University of Maryland School of Medicine.

to play a major role in community-based research as well as concentrating on molecular biology."

To meet other community needs, Dr. Wilson hopes to encourage more student interaction through outreach programs such as sending students to health fairs. His plans for revising the curriculum will play an important role in getting students out of the classroom and into the community. He believes this will be educational for students, will be helpful for people in the community, and will demonstrate the school's vested interest in Baltimore's future.

### **The Importance of Minority Students**

"In the 21st century, the majority of the people in the United States will be members of minorities," he explains. "If you don't prepare these individuals to do all of the science and health care and everything else that needs to be done, this country will be unable to compete. I think it is in our best interest to ensure that there will be a large number of well-educated, well-trained, well-prepared individuals to do all the things that this country is going to need in the year 2000. I want to help."

Dr. Wilson is very dismayed about the low percentage of underrepresented minorities currently serving on medical school faculties. Among our nation's medical schools, only about 3 percent of the faculty are members of underrepresented minorities. The majority of these faculty members — about 40 percent of that three percent total — are at Howard, Meharry, Moorehouse, and Drew. At the other 123 medical schools in the United States, only about 1.75 percent of the faculty consists of underrepresented minority members.

Attempting to change these figures, Dr. Wilson helped initiate the Association for Academic Minority Physicians, an organization dedicated to making people understand that this country needs to increase minority participation in academic medicine. Other founding members of this association included U.S. Health and Human Services Secretary Louis W. Sullivan MD; the late John W. Townsend MD, then chairperson of the Department of Medicine at Howard; Bruce Trotman MD, former chairperson of the Department of Medicine at Meharry; Carroll M. Leey MD, chairperson of the Department of Medicine at the New Jersey Medical School; and Gerald Thomson MD, associate dean of the College of Physicians and Surgeons at Columbia University.

To increase the number of minorities in academia, Dr. Wilson maintains that outreach efforts should begin with students in college and high school. At the University of Maryland Medical School, over 13 percent of the current freshman class consists of underrepresented minority individuals — a higher figure than at most other medical schools in the country.

In addition to difficulties encountered enter-



**Figure 3.** Dr. Wilson's wife, Patricia, stands with her husband and U.S. Health and Human Services Secretary Louis W. Sullivan MD. Dr. Wilson and Dr. Sullivan helped establish the Association for Academic Minority Physicians.



ing the academic system, Dr. Wilson admits that minority students generally face financial problems. According to Dr. Wilson, 85 percent of all medical students have some debt upon graduation. The amount of debt is usually higher for minority students than non-minority students. One potential explanation is that many minority students have other responsibilities that are not faced as commonly by non-minority students, such as having to provide for their family. "I don't mean their wife and children, I mean their families," he explains. "We do have financial aid programs and I am going to do my best to make sure they survive the cuts. I will do my best to help get all of our students through the system," asserts Dr. Wilson.

Overall, student applications at the medical school are up about 30 percent. The medical school now admits 150 students, chosen from a field of 4,000 applicants. Of the students who graduate, less than half enter primary care specialties such as internal medicine, pediatrics, family medicine, or obstetrics and gynecology.

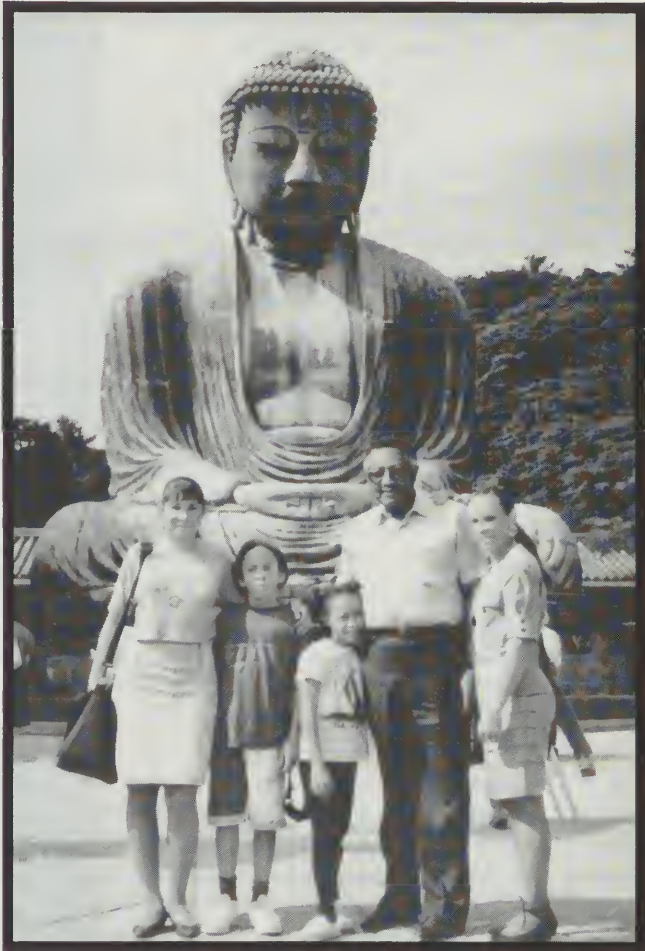
To encourage more students to enter primary care, Dr. Wilson suggests changes be made in the curriculum to make primary care more attractive to students. He notes that under the usual curriculum, students spend twelve weeks seeing critically ill people, many of whom have numerous complications. Although this isn't the norm in primary care practice, students have nothing else with which to compare it. As a result, many students do not view primary care as an attractive specialty. Dr. Wilson suggests changes in the way students rotate through the specialties so that they will have a more realistic understanding of primary care. He notes, however, that just changing the curriculum won't increase the number of primary care physicians; many medical students choose specialties other than primary care for economic reasons.

Dr. Wilson recalls that he selected gastroenterology as his specialty "because I was thoroughly impressed by an attending physician who happened to be a gastroenterologist. I knew nothing about gastroenterology and was so impressed by this doctor that I wanted to do what he was doing." He adds, "I'm probably one of the few people around who used the early rigid endoscopes on people."

**Background**

A graduate of Harvard University, Dr. Wilson earned his medical degree from Tufts in 1962. He served his internship and residency at the Veteran's Administration Hospital in Boston, where he was named senior medical resident for the Gastroenterology Service in 1964. A year later he became chief resident and research fellow in gastroenterology at the Lemuel Shattuck Hospital in Boston. After two years in the U.S. Air Force in Omaha, Nebraska, he practiced and taught in Brooklyn from 1968-1971, when he moved to the University of Illinois in Chicago.

In 1973, Dr. Wilson became chief of the Gastroenterology Sections of the Abraham Lincoln School of Medicine at the University of Illinois and the University of Illinois Affiliated



**Figure 4.** The Wilson family during a trip to Asia: (l to r) Sheila, Sean, Monique, Donald, and Patricia.

Hospitals in Chicago. During his tenure as chief, he was director of graduate education for the Department of Medicine of the Abraham Lincoln School of Medicine from 1975 to 1977 and was physician-in-chief of the University of Illinois Hospital in 1976. In 1975, he was promoted to professor of medicine on the faculty at the Abraham Lincoln School of Medicine and, from 1976 to 1977, was acting chairman of the Department of Medicine. In 1977 and 1978, Dr. Wilson spent a year as an honorary consultant and visiting professor of Medicine at King's College Hospital in London, England.

Before accepting the position as dean of the University of Maryland School of Medicine, Dr. Wilson was physician-in-chief at the University Hospital of Brooklyn, State University of New York Health Science Center at Brooklyn, and Kings County Hospital Center in Brooklyn from 1980 to 1991. While in New York, Dr. Wilson also served as regional chairman for the Department of Medicine in the Kings County Hospital, Woodhull Hospital, and State University Hospital from 1983 to 1988.

Dr. Wilson is a fellow of the American College of Nutrition and of the American College of Physicians. He is a member of numerous renowned medical societies, including



the Association of American Physicians and the Association of Professors of Medicine

He is also a founding member of the Digestive Diseases Foundation and of the Association for Academic Minority Physicians.

Since 1975, he has served as editor of *Prostaglandins*, a section of *Medicine and Clinical Therapeutics*. He has been consulting editor for the *Journal of the American College of Nutrition* since 1982 and associate editor for the *Journal of the Association for Academic Minority Physicians* since 1989.

Among his numerous special appointments, Dr. Wilson recently completed work with the National Institutes of Health (NIH) General Clinical Research Centers Committee. He was also appointed chairman of the NIH National Digestive Diseases Advisory Board and was chairman of the Food and Drug Administration's Gastrointestinal Drugs Advisory Committee.

During the week, Dr. Wilson resides near the medical school in Baltimore. On weekends, he commutes to Scarsdale, New York to be with his family. His wife, Patricia C. Littell; daughter Sheila, 23, an aspiring pediatric psychologist; son Sean, 12; and daughter Monique, 9, will move to Maryland to join him in June 1992. Dr. Wilson's eldest son, Jeffrey, 29, is an engineer living in Chicago.

### The Year 2000

Dr. Wilson looks forward to the challenge of being dean of the University of Maryland School of Medicine. He concedes, "I didn't realize that it would be quite the challenge that it is." When Med Chi President J. David Nagel recently welcomed Dr. Wilson to Maryland, Dr. Nagel asked what Med Chi could do to facilitate the essential changes that Dr. Wilson envisions. Dr. Wilson responded that he could conceive of several scenarios in which the medical school could work directly with the organized medicine community to promote advances in health care and medical education.

Dr. Wilson added that the school would be applying for federal research grants to develop practice protocols for the management of commonly occurring diseases in the community. Once developed, there will be opportunities for the medical school to communicate this information to the physician community through medical societies and publications like the *MMJ*. Similarly, Dr. Wilson is interested in working with Med Chi to develop relevant continuing medical education (CME) programs for physicians in Baltimore and throughout the state. This may be a bidirectional effort in that Med Chi could help identify topics and methods of



Figure 5. Sheila Wilson (l), an aspiring pediatric psychologist, poses with her father.



Figure 6. Dr. Wilson's twelve-year-old son Sean (c), his wife Patricia (r), and their nine-year-old daughter Monique (not pictured) plan to move to Maryland to join Dr. Wilson (l) in June 1992.

presentation that would be most relevant to physicians, patients, and the community.

Dean Wilson's plans to revise the curriculum, expand facilities, augment research, and improve community relations are just a few examples of his vision for the medical school in the year 2000. Due to current financial difficulties, it is difficult to estimate how many of these changes will be implemented. One thing, however, is certain: Dr. Wilson displays the innovation, drive, and determination to successfully lead the University of Maryland School of Medicine for many years to come. ■



---

# The Use of a Low-level Stage During Exercise Testing in Predicting Severe Coronary Disease

---

Romulo F. Baltazar MD, Albert Grant MD,  
Vicki O'Mara RN and Mark B. Effron MD

---

*From the Division of Cardiology, Department of Medicine, Sinai Hospital of Baltimore, where Dr. Baltazar is Director, Non-invasive Cardiology, Dr. Grant is the former Director of the Cardiac Rehabilitation Program, Ms. O'Mara is a nurse, and Dr. Effron is Director of the Coronary Care Unit*

---

*In a study of eighty-one patients with a positive stress test who underwent coronary angiography, the results showed that a positive test at warm-up or Stage I of the Bruce protocol is usually a sign of severe coronary disease, although patients with less severe disease may also be included.*

---

**P**atients with severe coronary artery disease (CAD) manifest positive ischemic responses early during exercise testing—usually during the first two stages of the Bruce protocol.<sup>1,2</sup> Although an early positive test is often a sign of severe CAD, patients with less severe disease may also be included. Therefore, the sensitivity and the predictive value of this early ischemic response in identifying left-main coronary disease (LMCD) and three-vessel disease (3VD) remain poor and have not been clinically useful.<sup>2</sup> We have noted that some patients undergoing routine diagnostic exercise testing often develop very early positive ischemic responses if the exercise test is modified to include a stage lower than Stage I of the Bruce protocol. It is possible that with the addition of a lower level stage, ischemic changes could be detected earlier and be more predictive of LMCD and 3VD than if first manifested at a higher level of exercise.

## Methods

To test this hypothesis, eighty-one patients with positive stress tests, who underwent coronary angiography within three months of exercise testing, were reviewed. There were sixty-six males and fifteen females, ranging in age from thirty-five to eighty-four (mean age, fifty-eight years). The patients were referred for exercise tests because of symptoms suspicious for CAD. Patients with intraventricular conduction defects in baseline electrocardiogram (EKG), or on anti-anginal medications on the day of the test, were excluded. Each patient was exercised on a motorized treadmill starting at a stage lower than Stage I of the Bruce protocol (warm-up stage). The test consisted of a workload of two mph, 2.5 percent grade (approximately three METS (multiples of resting oxygen consumption)) for two minutes. The patient rested for three minutes and was then tested using the standard Bruce protocol.<sup>3</sup>

The twelve-lead EKG was recorded on a three-channel recorder at baseline, during and after warm-up, every minute during exercise, at peak exercise, immediately after exercise, and every minute for the next six to

ten minutes after exercise. An oscilloscope displayed each patient's rhythm at all times. Exercise testing was terminated usually because of symptoms such as chest pain, shortness of breath or fatigue, as well as for grossly evident ischemic changes (2 mm or more of ST segment depression) on the exercise EKG.

An exercise test was considered positive if 1 mm or more of horizontal or downsloped ST segment depression was present in at least three consecutive beats in any of the twelve leads during or after exercise testing. The heart rate at the earliest ischemic manifestation was obtained from the recorded EKG, and the maximal predicted heart rate for each patient was adjusted according to age.<sup>4</sup>

All patients had coronary angiograms within three months of the exercise test. LMCD was defined as 50 percent or greater narrowing of the luminal diameter of the left main coronary artery, and significant CAD was defined as 70 percent or greater narrowing of any of the three coronary arteries or their major branches. An exercise test result was considered a true positive test when the EKG abnormalities during exercise testing were associated with significant CAD during angiography. The exercise test result was considered a false positive when the EKG abnormalities were not associated with significant narrowing of any coronary artery.

Results

The Table shows the distribution of CAD among eighty-one patients with positive stress tests. There were more patients with warm-up or Stage I positive tests compared to other stages, reflecting the higher number of patients with positive stress tests who were eventually referred for coronary angiography by their physicians. Thirty-six of eighty-one patients were warm-up positive. Seventy-five percent (27/36) of these warm-up positive patients had multivessel disease, with more than half (61 percent) having LMCD or 3VD. Twelve warm-up positive patients had LMCD (sensitivity, 75 percent; predictive value, 33 percent) and ten patients had 3VD (sensitivity, 38 percent; predictive value, 28 percent). The sensitivity and the predictive value of a warm-up positive test for LMCD or 3VD are 52 percent and 61 percent, respectively.

Thirteen patients could not exercise beyond the warm-up period because of symptoms and/or marked ST segment depression during exercise. A total of fifty-one patients were

positive at Stage I (twenty-three at warm-up, twenty-eight at Stage I). Eighty-two percent (42/51) of Stage I positive patients had multivessel disease. The sensitivity and the predictive value of a Stage I positive test are 100 percent and 20 percent, respectively, for LMCD, 78 percent and 35 percent for 3VD, and 85 percent and 55 percent for LMCD or 3VD.

Four of eighty-one patients (5 percent) with positive exercise tests had no significant CAD during angiography. Two of the four false positive responses occurred during warm-up.

The average heart rate corrected for age is 63 percent for warm-up positive patients and 67 percent for Stage I positive patients. Most of the patients (21/36) who were warm-up positive had heart rate responses  $\leq$  70 percent of the predicted maximum; approximately 86 percent (18/21) of these patients had LMCD or 3VD. For Stage I positive patients, twenty-six of fifty-one had heart rate responses  $\leq$  70 percent of the predicted maximum; approximately 58 percent (15/26) of these patients had LMCD or 3VD.

Discussion

The prognosis and quality of life of patients with LMCD and 3VD have been significantly improved with surgery.<sup>5</sup> Exercise testing offers a noninvasive alternative for identifying this group of patients, so they can be managed appropriately. However, the sensitivity and predictive value obtained from traditionally used parameters for identifying patients with LMCD and 3VD during exercise testing have been generally poor and are not helpful for the individual patient. Our study attempts to better identify this group of patients during routine diagnostic exercise testing by the addition of a stage lower than Stage I. The results show that a positive test very early during exercise at warm-up or Stage I levels usually indicates the presence of multivessel disease. There were, however, a number of patients with single vessel disease and a few with no significant CAD who also became positive at this lower-level stage (total, 25 percent), suggesting that an early positive test is not necessarily indicative of severe CAD.

The sensitivity of a warm-up positive test for LMCD or 3VD is 52 percent, compared to 85 percent for Stage I positive patients. The predictive value of a positive test for LMCD or 3VD is 61 percent for warm-up and 55 percent for Stage I. This suggests that a positive test at the three MET level does not identify the presence of LMCD or 3VD any better than a positive test at Stage I (four to five METS). There was, however, a tendency for patients who were positive at warm-up to have LMCD or 3VD if the heart rate was  $\leq$  70 percent of the maximum predicted, although this was not statistically significant ( $p=0.077$ ).

Therefore, the addition of a lower-level stage during routine diagnostic stress testing is not helpful in predicting the presence of LMCD or 3VD. Although one would expect that a positive test at a lower level of exercise would predict severe CAD better than a positive test at a slightly higher workload, a lack of correlation exists partly because coronary anatomy does not always reflect coronary flow and, therefore, the

Table. Distribution of Coronary Disease

Positive Stage	N	LMCD	3VD	2VD	1VD	NL
Warm-up	36	12	10	5	7	2
Stage I	28	4	11	10	3	0
Stage II	11	0	4	2	4	1
Stage III	3	0	0	2	1	0
Stage IV	3	0	1	1	0	1

N=Number of Patients, LMCD=Left-Main Coronary Disease, 3VD=Three-Vessel Disease, 2VD=Two-Vessel Disease, 1VD=One-Vessel Disease, NL=Insignificant Coronary Disease



angiographic and electrocardiographic findings are not necessarily comparable.

### References

1. Schneider RM, Seaworth JF, Dohrmann ML, Lester RM, Phillips HR, Bashore TM, Baker JT. Anatomic and prognostic implications of an early positive treadmill exercise test. *Am J Cardiol* 1982; 50:682-8.
2. Weiner DA, McCabe CH, Ryan TJ. Identification of patients with left main and three vessel coronary disease with clinical and exercise test variables. *Am J Cardiol* 1980; 46:21-7.
3. Bruce RA, Kusumi F, Hosmer D. Maximal oxygen intake and nomographic assessment of functional aerobic impairment in cardiovascular disease. *Am Heart J* 1973; 85:546-62.
4. Sheffield LT, Holt JH, Reeves TJ. Exercise graded by heart rate in electrocardiographic testing for angina pectoris. *Circulation* 1965; 32:622-9.
5. Takaro T, Hultgren HN, Detre KM, Peduzzi P. The Veterans Administration cooperative study of stable angina: Current status. *Circulation* 1982; 65(II):60-67. ■



## Bright Oaks Courtyard

2021 EMMORTON ROAD (RTE. 924) • BEL AIR, MD 21015

### 20,000 Square Ft. Professional Office Buildings

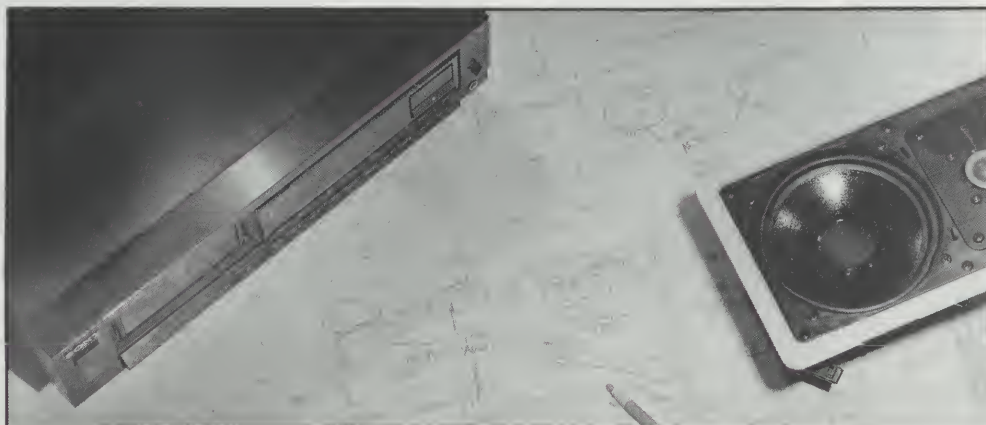
- Easy Access to I-95 & Rt. 24
- Close Proximity to residential & commercial developments
- Customized suites
- HVAC gas, elevators, ample parking
- Competitive rates
- Tenant allowances

**Contact: C.H. Goldberg, MT-(ASCP); CIBN**  
**(301) 893-1800**  
**1-800-437-8558**

Developed by:



ROBERT WARD REALTY INC.



# The Audio Architects.

For a complete home Audio/Video System, call the experts at Soundscape. Our specialists work directly with your designers and architects to custom design a system that fits your needs and tastes. Whether you're building or remodeling, just bring us your plans and we'll do the rest.



406 West Cold Spring Lane in Roland Park, 889-1134 • 202 West Fayette Street at Park Ave., 727-1134

Infinity • Polk • Denon • Bang & Olufsen • Carver • NAD • Sony ES • Aragon • Conrad-Johnson • Adcom • Paradigm • Vandersteen • Yamaha

# BEFORE YOU BUY INSURANCE, WE RECOMMEND YOU SEE A DOCTOR



**W**ord-of-mouth is our best advertising. So we urge you: get the word.

Talk to any of the 13,000 doctors with professional liability insurance from The P-I-E Mutual.

These doctors own this company. More than 160 of them sit on our 13 managing boards. They help to shape policy,

influence selection of applicants, consider the merits of claims.

They're benefactors of a program that offers discounts to loss-free members. And the protection of a prepaid law firm that is seasoned in all areas of claims, and wins 90% of cases that go to court.

Call us.  
1-800-228-2335. Get the facts, doctor to doctor.



---

THE P-I-E MUTUAL  
INSURANCE COMPANY

---

NORTH POINT TOWER  
1001 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114-1149



WINTERICH-NEFF & ASSOCIATES  
7 EAST REDWOOD, SUITE 810  
BALTIMORE, MARYLAND 21202  
301-234-2800



---

# Insignificant Blunt Maternal Trauma with Lethal Fetal Outcome: A Case Report

---

Islam H. Sidky MD, Norman H. Daikoku MD and Jay Gopal MD

---

*Dr. Sidky is an obstetrician/gynecologist in private practice in Greenville, SC. Dr. Daikoku is Director of Obstetrics and Dr. Gopal is a neonatologist/pediatrician at Union Memorial Hospital, Baltimore, MD.*

---

*We report a case of a twenty-nine-week breech fetus with skull fracture, intracranial bleeding, and liver laceration sustained in a vehicular accident. This case describes insignificant maternal trauma with poor fetal outcome.*

---

**M**otor vehicle accidents can inflict severe trauma on the mother and her fetus. Crosby reported maternal death as the leading cause of fetal death subsequent to vehicular accident.<sup>1</sup> In addition, the greater the severity of maternal injury, the greater the likelihood of fetal demise.<sup>1,2</sup> However, even minor maternal injuries can result in fetal death.<sup>3,4</sup> Cummings reported a case of fetal skull fracture following a vehicular accident that caused only minor trauma to the mother, with no abdominal bruising or tenderness.<sup>5</sup>

All reports of fetal skull fracture reviewed in the literature occurred in the vertex presentation when the engaged fetal head is vulnerable to injury from fracture of the maternal pelvis.<sup>2,5</sup> Crosby describes an experimental study of head injury in breech baboon fetuses which do not include skull fractures.<sup>6</sup>

## Case Report

An eighteen-year-old woman (gravida 1, para 0) at twenty-nine weeks gestation was admitted for evaluation following a motor vehicle accident. The patient-driver was wearing a three-point restraint belt when she impacted with a pole at approximately thirty miles per hour. The patient sustained an upper lip laceration requiring several sutures. There was no loss of consciousness, abdominal bruising, or tenderness. An x-ray examination of the head, chest, abdomen, and pelvis were normal. A limited intravenous-pyelogram (IVP) was normal (Figure 1). Vital signs, hematocrit, and fetal heart were normal. An external fetal monitor tracing showed no deceleration; an irritable uterine pattern was resolved with intravenous hydration.

A sonogram confirmed a twenty-nine-week breech fetus with normal amniotic fluid and no sign of abruption. Acute onset of fetal bradycardia was identified ten hours following the initial examination when the patient complained of abdominal pain while under continuous monitoring and observation. A cesarean section was performed and a greater than 25 percent placental abruption was noted. A 1,300 gm male infant was

delivered with Apgar scores of 0 at one minute, 0 at five minutes, and 3 at ten minutes. Kleihauer-Betke analysis showed no fetomaternal transfusion. The mother's serum was positive for cannablenoids.

The infant was intubated and stabilized. Pupils were dilated and fixed, with no spontaneous activity or breathing. A head sonogram revealed extensive Grade IV intraventricular hemorrhage. This was complicated by thrombocytopenia, hypovolemia, renal failure, multiple transfusions, and recurrent seizures. In spite of full respiratory support and a constantly increasing  $\text{FiO}_2$  (fractional inspired oxygen), the oxygen saturation level decreased. Twelve days following delivery, the infant expired. Autopsy revealed a left parietal skull fracture with intracranial bleeding and liver laceration with subcapsular hematoma.

### Discussion

Excluding maternal death, abruptio placenta is the most common cause of fetal death following major or minor trauma during pregnancy.<sup>1,2</sup> Minor injuries account for 1 to 5 percent of fetal death, and major injuries account for 20 to 50 percent of fetal loss.<sup>1,2,7</sup> We report a case of abruption of the placenta ten hours post-trauma. This may emphasize the need for prolonged fetal monitoring and extended patient observation in such cases.<sup>8,9</sup>

The majority of fetal skull injuries are attributable to maternal pelvic fracture in which the dislocation of the pelvic bone crushes the entrapped fetal skull.<sup>1,6</sup> Cummings and Warren reported skull fracture in the vertex presentation following minor maternal injury without pelvic fracture.<sup>5</sup> To our knowledge, ours is the first report of fetal skull fracture in the breech presentation secondary to blunt maternal trauma.

The maternal patient presented with no apparent external abdominal bruising or injuries, as well as no internal injuries during an exploration of the abdomen and pelvis at the time of cesarean section. The severity of the accident was reflected in the extensive damage to the vehicle; this information was obtained from the police report. A review of the patient's x-ray was negative for fetal skull fracture, perhaps because of overlapping with the maternal spine (Figure 2). The patient's injuries were considered as insignificant trauma according to previously published classifications.<sup>2,10</sup>

Hoff et al noted in a recent report that maternal abdominal and facial injuries are indicators of the mechanical force of an accident and may predict poor fetal outcome.<sup>11</sup> However, using the Injury Scoring System (ISS) was not of value for our patient.<sup>12</sup> We conclude that physicians cannot depend only on the severity of trauma to the mother alone as a prediction of outcome for the fetus. Knowing the severity of



Figure 1. A limited intravenous pyelogram was normal.



Figure 2. The patient's x-ray was negative for fetal skull fracture, perhaps because of overlapping with the maternal spine.



the accident, including the speed and extent of vehicular damage, may alert physicians to consider a prolonged observation of those patients who have sustained insignificant injuries.

References

1. Crosby WM, Costiloe JP. Safety of lap belt restraint for pregnant victims of automobile collisions. *N Engl J Med* 1971; 284:632-6.
2. Rothenberger D, Quattlebaum FW. Blunt maternal trauma: A review of 103 cases. *J Trauma* 1978; 18:137-9.
3. Agran PF, Dunkle DE. Fetal death in motor vehicle accidents. *Am Emerg Med* 1987; 16:1355-8.
4. Stafford PA et al. Lethal intrauterine fetal trauma. *Am J Obstet Gynecol* 1988; 159:458-9.
5. Cummings DC, Warren FD. Fetal skull fracture from an apparently trivial motor vehicle accident. *Am J Obstet Gynecol* 1978; 132:342-3.
6. Crosby WM et al. Impact injuries in pregnancy. I: Experimental studies. *Am J Obstet Gynecol* 1968; 101:100-10.
7. Williams JK et al. Evaluation of blunt abdominal trauma in the third trimester of pregnancy, maternal and fetal consideration. *Obstet Gynecol* 1990; 75:33-7.
8. Higgin SD et al. Late abruptio placenta in trauma patients: Implications for monitoring. *Obstet Gynecol* 1984; 63(3 Suppl):1S-12S.
9. Kettel LM et al. Occult placental abruption after maternal trauma. *Obstet Gynecol* 1988; 71(3):449-53.
10. Crosby WM, Haycock CE, Kavkal SS. An emergency care protocol for trauma in pregnancy. *Emerg Med Reports* 1987; 8(10):73-80.
11. Hoff WS et al. Maternal predictors of fetal demise in trauma during pregnancy. *Surg Gynecol Obstet* 1991; 172(3):175-80.
12. Baker SP et al. Injury severity score: A method for describing patients with multiple injuries and evaluating emergency care. *J Trauma* 1974; 14(3):187-96.

CHESAPEAKE  
IMAGING  
SPECIALISTS



Chesapeake Imaging Specialists

Providing Ultrasound, Radiology, Computerized Tomography, Nuclear Medicine and Mammography Services is Pleased in Wishing the Medical Community a Happy and Healthy Holiday Season

4000 Old Court Road, #103  
Pikesville, MD 21208  
(301) 484-9415

We Build Beautiful Sunlit Home Additions



SUN ROOM COMPANY  
Sunspace Design  
Studio, Inc.  
(410) 882-6200

MHC 16069

“ THE BEST CARE ANYWHERE ”

Advanced-Care  
AMBULANCE



665-0550

RADIO DISPATCHED  
CLEAN MODERN VEHICLES  
24 HOURS A DAY - 7 DAYS A WEEK  
FULLY LICENSED EMERGENCY MEDICAL TECHNICIANS  
LOCAL AND LONG DISTANCE TRANSPORTS  
WE BILL MAJOR INSURANCE COMPANIES  
MEDICARE AND MEDICAID APPROVED

LOCATED IN THE  
MITCHERLING BUILDING • 9413 HARFORD RD.

# THE TEST OF PROFESSIONAL LIABILITY COVERAGE ISN'T WHEN YOU BUY IT.

Now Maryland physicians can get coverage from the carrier that offers a

**IT'S WHEN  
YOU USE IT.**

stronger support system at the critical time of need than any other company serving the region.

The carrier is the successful physician-owned National Capital Reciprocal Insurance Company: NCRIC.

The leading professional liability carrier in D.C. now comes to Maryland offering unique approaches to service and protection, all at Maryland rates.

For example, you'll be assigned your own NCRIC claims representative who serves substantially fewer clients

than reps with other carriers. So, in claims and underwriting, you'll get faster, more personal attention to any question or problem, minor or major.

NCRIC also offers especially attractive coverages for physicians just starting a practice, those practicing in two or more jurisdictions (D.C., MD, VA), part-time practitioners, and physicians who take maternity leave.

Learn more about the ways NCRIC demonstrates a sensitivity to the needs of the medical community in ways no other carrier does. Call (301) 424-8136.

**NCRIC**  
**MARYLAND**

**National Capital Reciprocal Insurance Company**  
7200 Wisconsin Ave., Suite 410, Bethesda, MD 20814



# **We pay attention to every detail.**

With today's advanced medical technology, we're able to produce diagnostic images of remarkable complexity, clarity and detail. Which is why our head and body MRI imaging services are so valuable to you and your patients.

Magnetic Imaging of Baltimore's (MIB) dedicated radiologists and staff provide your patients with the care and experience you expect. We are able to schedule your patients within 24 hours of their request at our convenient location on the campus of Greater Baltimore Medical Center.

At Magnetic Imaging of Baltimore, we realize what a difference the details can make. So take a closer look. You might discover something your patients should know about.



*Lumbar Spine*

## **Magnetic Imaging of Baltimore**

6715 CHARLES STREET  
BALTIMORE, MD.

301-296-5610

(Located on the campus of Greater Baltimore Medical Center)

# Continuing...

For over fifteen years, the Med Chi Agency has been serving the needs of Maryland physicians...*your* needs, with unrivaled commitment and dedication. And as the Agency has grown, so has your trust...in us, in our products and in the way we do business with you.

As a comprehensive insurance agency, we are able to offer a wide range of insurance and financial options. Among these are:



Professional Liability Insurance (Malpractice)



Personal insurance, including homeowners, auto, boat and recreational vehicle coverage and personal umbrella insurance.



Office insurance, including medical equipment, medical records, computer equipment, account receivables, workers compensation, business auto and employee dishonesty



Financial and estate planning, specifically tailored to the medical professional.



Individual and group, life, health and income protection.



Qualified and non-qualified Retirement Planning

## ...A Commitment To Service



**THE MED CHI AGENCY**  
1204 Maryland Avenue  
Baltimore, Md. 21201-5583  
(301) 539-6642  
1-800-543-1262 (in Maryland)  
FAX (301) 752-5421



# Dr. Nathaniel Potter's Contributions to Medicine and the University of Maryland

---

William Samuel Potter II

---

*Mr. Potter is the great great grandnephew of Dr. Nathaniel Potter and the family historian.*

---

*One of the founders of the University of Maryland, Dr. Nathaniel Potter was the school's first Professor of Theory and Practice of Medicine*

---

**D**r. Nathaniel Potter (Figure 1), of Newport, Rhode Island ancestry, was the son of Dr. Zabdiel Potter, a surgeon in the Continental Army during the Revolutionary War. He was born in 1770 in Easton, Talbot County, Maryland and was raised at Potter's Landing (Figure 2) in Caroline County, Maryland. He was first married on June 3, 1798 to Catherine Goldsborough, daughter of Thomas Goldsborough and Catherine Fauntleroy of Virginia who was a niece of General George Washington. However, they were only married about eight years before Catherine died at a relatively young age. His second wife was Henrietta M. Ford, whom he married on May 20, 1809. They had two daughters, Henrietta and Mary, who never married.

Nathaniel Potter graduated from college in New Jersey and was attending medical school at the University of Pennsylvania when his father died in April 1793. At that time, he briefly returned to Potter's Landing, Caroline County. During the Philadelphia yellow fever epidemic in August of that same year, he again returned to Maryland for an extended period to settle his father's estate and assume responsibility for the care of his father's practice in Caroline County. During his year of practice in Caroline County, he learned a great deal, particularly about yellow fever. His theory that yellow fever was not contagious between people helped to make him famous. Once the yellow fever epidemic was over, he returned to Philadelphia to complete the requirements for his medical degree; he graduated in 1796.

In 1797, Dr. Potter began to practice in Baltimore where he continued to do extensive work on yellow fever. He rejected the views of his former tutor, Dr. Benjamin Rush, that yellow fever was contagious. (It was said that Nathaniel Potter was the favorite pupil of Dr. Rush, one of the great men of America during the late 1700s and early 1800s, and a signer of the Declaration of Independence.) To prove his convictions, Dr. Potter went to the extreme of soaking towels in the "perspirable matter" of a patient with yellow fever whom he was attending on September 29, 1797. After binding the towels to his head and retiring, he reported that in spite of "extreme nauseous fotor" he experienced only transient sickness and slept



Figure 1. Nathaniel Potter MD

until 7 a.m. the next morning. He showed no later signs of incapacitation. In mid 1798, Dr. Potter inoculated himself with "perspirable matter" from a patient in the last stages of yellow fever. On October 11, 1798, he took suppurative matter from inguinal buboes of other malignant cases and inoculated himself. Dr. Potter experienced only local redness at the sites of the inoculations. His courageous self-studies really proved nothing for several reasons: It was possible that he was immune because of a prior attack of yellow fever, or his test patients may not have suffered from the disease or may have eliminated the virus from their tissue. Dr. John Beale Davidge, the first to agree with Dr. Potter on the subject of yellow fever, had his views published in the *Federal Gazette of Baltimore* in 1797. The question of yellow fever contagion would go unresolved for almost a century until Drs. Henry Carter and James Carroll played major roles in settling the question and established its transmission by mosquitoes.<sup>1</sup>

Dr. Potter played a major role in the founding and maintaining of the University of Maryland Medical School. In the fall of 1807, Dr. Pot-

ter, Dr. Davidge, and associates began to lecture together. This was the beginning of the College of Medicine of Maryland. They successfully applied to the Maryland Legislature for legal protection and a charter for the school. The school was formed and officially named "The College of Medicine of Maryland." It was placed under the control of the college's professors and the newly created Board of Medical Examiners.<sup>2</sup> This was the beginning of the Board of Regents' reign. (At this time, only four other medical schools existed in the country: Harvard University, Dartmouth College, University of Pennsylvania, and the College of Physicians and Surgeons of New York.)

In 1812, the college began to look for funds to build suitable quarters. Individual members of the Board of Regents, including Dr. Potter, borrowed funds from local banks. They also petitioned the Legislature for the right to conduct a lottery to raise additional funds. (At that time, lotteries were very popular in helping to raise funds for Baltimore's old buildings.) However, the majority of the funds that were obtained came from the Board members' personal notes. Colonel John Eager Howard sold them the lot on the corner of Greene and Lombard Streets for a nominal fee. This is the location of Davidge Hall.

In 1812, the Board of Regents petitioned the Legislature to obtain a charter for a university, with the medical college as the nucleus. This request was granted, and in 1812 the University of Maryland was established.<sup>3</sup> The charter of the University called for Schools of Divinity, Arts and Sciences, Law, and Medicine. Each of these schools was to be governed by its own faculty and, collectively, these faculties would comprise a general Board of Regents that would govern the whole University. The School of Medicine was the strongest at that time and is the only school which has endured an uninterrupted existence. For about fifteen years after its beginning, the University of



Figure 2. Potter's Landing in Caroline County, childhood home of Nathaniel Potter MD



Maryland Medical School struggled under a heavy burden of debt, working and fighting for permanence. Remember that the University was originated by a private group of men. Its buildings were erected by them largely out of their own purses, and most of them were still accountable for notes for large sums of money used for running the University.

In 1826, the Legislature proceeded to pass an Act that, in essence, took away control of the University from the Board of Regents and placed it instead in the hands of a group of Trustees appointed by politicians. Adding insult to injury, the decree made no provision for reimbursement to the members of the Board of Regents for money they had spent, and expressly announced that the faculty was not to be relieved from paying the interest on a large loan which still stood against the University.<sup>2</sup>

The faculty did not sit idly by under the State's ruling, but protested vigorously this invasion of rights. However, there was little that the Board of Regents could do. Because they were so in debt, they could not afford to pay legal fees for a battle against the Legislature. They consulted constitutional authorities, such as the U.S. Attorney General and Statesman Daniel Webster, who informed them that the action of the Maryland Legislature was clearly illegal. This act, passed by the Maryland Legislature, violated Article I, Section 10, of the U.S. Constitution that forbids any state from passing a law impairing the obligation of contracts. Dr. Potter was never reconciled to the Legislature's decision and vowed to continue to fight. To the very near end of his life, he never let an opportunity go by to take a crack at the Trustees he so ardently disliked.<sup>2</sup>

The Board of Regents reorganized, with Drs. Davidge, Potter, DeButts, Hall, McDowell, and Baker as members. A costly legal battle ensued for many years until 1839 when the Maryland Court of Appeals reversed the decision of the lower court. This high court's decision dissolved the Board of Trustees, forcing them to withdraw their illegal charter and revert control to the original founders, the Board of Regents.<sup>4</sup> However, this legal victory cost Dr. Potter his entire fortune. He was forced to move out of his residence on Lexington St. and take up residence in a much smaller house on St. Paul St. After spending most of his wealth on the founding and maintaining of the medical school, and on the lengthy legal battle with the State of Maryland, he lived in poverty until his death. Yet Dr. Potter was one of two or three individuals who started the school and who stayed with it until it became one of the most prosperous and celebrated medical schools in the country.<sup>3</sup> Every other man whose name appears in those early annals either died, quit under fire, or eventually wavered in his loyalty to the medical school. Dr. Potter seems never to have hesitated an instant in his unswerving devotion to its cause; it seems nothing shook him. The University owes its present existence mainly to Drs. Potter and Davidge, as well as the other members of the Board of Regents.

Dr. Potter was not only a founder of the University of Maryland Medical School, but also held the Chair of Theory

and Practice of Medicine from 1807 until his death on January 2, 1843. Dr. Potter spent two hours a week leading students through the infirmary to match lecture material with diagnosis, theory, and observable results. The infirmary was completed and occupied as the Maryland University Hospital in 1823;<sup>1</sup> funds contributed by the faculty (Dr. Potter and others) made the building possible. It is said that he taught for almost forty years from the same ragged deteriorating yellow notes. In 1829, his battle with the janitor, who was selling spirits and playing cards with students, only increased his popularity.

Dr. Potter also held the following positions: attending physician, Baltimore General Dispensary, 1802-1805; Secretary, Medical and Chirurgical Faculty of Maryland, 1801-1809; co-founder of the College of Medicine of Maryland, 1807; Professor of Practice, University of Maryland College of Medicine, 1807-1843; Dean, the College of Medicine and the University of Maryland, 1812 and 1814; President, Baltimore City Medical Society of Maryland, 1812; President, Medical Society of Maryland, 1817; Orator, Medical and Chirurgical Faculty, 1817; attending physician, Baltimore Almshouse; Editor, *Baltimore Medical and Philosophical Lycaem*, 1811; and Editor, *Maryland Medical and Surgical Journal*, 1840-1843.<sup>3</sup>

He also contributed greatly to literature of that time. The following is his bibliography:

- *An Essay on the Medical Properties and Deleterious Casualties of Arsenic*. Submitted to the examination of the Rev. John Ewing, provost, and the trustees and medical faculty of the University of Pennsylvania on May 17, 1796 for the degree of Doctor of Medicine.
- *Fistula in ano treated by mercury*. *Medical and Phys Recorder* 1809; i:119, 125.
- The anomalous character of the measles in Maryland, 1808. *Baltimore Medical and Philosophical Lycaem* 1811; no 1: 83-8.
- The distemper epidemic of 1812. *New York Medical Repository* 1812; vi:1.
- *A Memoir on Contagion, More Especially as it Repeats to the Yellow Fever*. (Read in convention of the Medical and Chirurgical Faculty of Maryland June 3, 1817.)
- *A Memoir on Contagion, More Especially as it Repeats to the Yellow Fever*. Published by Edward J. Coale. 1818.
- Report to city authorities on the yellow fever, 1819-1820. In document on same. 1820;140.
- Edits Armstrong on *Typhus Fever*, with notes, critical and explanatory. Baltimore: J Webster, publisher, 1821; 8:468.
- Letter to Dr. James Smith on vaccination. *Inquir*. 1822.
- Cholera infantum. *Baltimore Medical and Surgical Journal and Review* 1833; i:104.
- Pneumonia biliosa. *Baltimore Medical and Surgical Journal and Review* 1833; ii:261.
- Non-identity of gonorrhoea and syphilis. *Baltimore Medical and Surgical Journal and Review*, 1833; iv:387.
- *Some Account of the Rise and Progress of the University of Maryland*. Baltimore: Joseph Robinson. 1838.
- Edits (with S. Calhoun) Gregory's *Practice of Medicine*, (2 vols) with notes and additions adapted to practice in the United States (2nd American edition from 3rd London edition). Philadelphia. 1839.
- *Notes on the Locusta Septentrionalis Americane Decem Septima*, Baltimore. 1839.

- Also contributed to books by John Armstrong (1821) and George Gregory (1826).<sup>5</sup>

Dr. Nathaniel Potter, whose portrait hangs in Davidge Hall where he once taught, died on the morning of January 2, 1843 at the age of seventy-three from a sudden and very brief illness. His obituary describes him as "a practitioner of medicine, he was remarkable for promptitude and integrity of judgment, and for the boldness and energy of his remedial measures. As a teacher, Dr. Nathaniel Potter was perspicuous and impressive, displaying in his lectures extensive knowledge and great practical good sense, rendering his subject pleasing and attractive by his native power of wit and illustrating and enforcing his doctrine by the ample resources of a profound and elegant erudition."<sup>6</sup>

He was buried in Greenmount Cemetery by the charity of a group of friends and medical associates on a cold January morning in 1843. His grave is located in Greenmount Cemetery at area six, lot ninety-six, in an unmarked grave next to his daughter, Mary Potter, who died January 27, 1894.

January 2, 1993 will mark the 150th anniversary of Dr. Nathaniel Potter's death. It is hoped that by then a suitable grave marker can be obtained so as to pay honor to a man who contributed so much to medicine and the University of Maryland Medical School.

### References

1. Woodward, Theodore E. Nathaniel Potter, First Professor of Theory and Practice of Medicine. University of Maryland Bulletin of The School of Medicine 1978; 63(4):10-14.
2. Potter, Nathaniel. Some Account of the Rise and Progress of the University of Maryland. Baltimore: Joseph Robinson. 1838.
3. Howell, Clewell. Of the School of Medicine University of Maryland, University of Maryland Bulletin of The School of Medicine 1958; 43(3):64-72.
4. Cordell EF. Historical Sketch of the University of Maryland School of Medicine. Baltimore: Isaac Friededwald. 1899.
5. Quinan, John Q. Medical Annals of Baltimore. Baltimore: Isaac Friedenwald. 1884; 147-8.
6. Obituary. Maryland Medical and Surgical Journal 1843; iii:391-2. ■



## PROFESSIONAL COMPOUNDING CENTER OF BALTIMORE (Kaye's AID Pharmacy)

DAVID B. LIEBMAN, R.Ph.  
Compounding Pharmacist

6913 Belair Road  
Baltimore, MD 21206

**We Make Medicines  
for Your Patients' Special Needs**

**We ship anywhere  
by UPS FAST SERVICE**

**ABSOLUTELY no cost to the Physician**

**DOCTOR, WHAT CAN WE MAKE FOR YOU?**

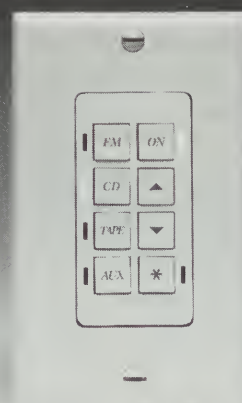
Call or Fax us today!  
(301) 665-5192 • Fax 301-668-8533  
Toll free 1-800-673-8277

**Turn it up. Turn it down.  
Let the music follow you around.  
Whole house stereo from Gramophone.**

Phantom of The  
Opera in the  
kitchen

Mozart in the  
bedroom

Ronstadt in  
the den



Everyone can  
have their  
music where  
they want it.

Whether you're looking for a new CD player  
or a whole house stereo, Gramophone  
can bring your home to life with music.

## GRAMOPHONE

Maryland's Finest Stereo and Video Stores

BALTIMORE • 821-5620 ∞ COLUMBIA • 465-5500



# ***The Personality Disorder Treatment Program of Sheppard Pratt Hospital***

Very often, specialized inpatient evaluation and treatment is a critical step in the effective care of a borderline patient.

The Personality Disorder Treatment Program at Sheppard Pratt offers a combination of services that may help to untangle difficult clinical questions and facilitate your patient's continued outpatient treatment.

We offer:

- ☐ Short-term and intermediate-term specialized inpatient treatment
- ☐ Extended-term intensive inpatient treatment
- ☐ Comprehensive diagnostic evaluation
- ☐ Psychotherapy and psychopharmacology consultation
- ☐ Intensive individual and group psychotherapy provided by our staff of psychiatrists and psychologists
- ☐ Long-term treatment planning

If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact the Adult Admissions Office at:

(301) 938-3800  
6501 North Charles Street  
Baltimore, Maryland 21285-5815

▪ *Sheppard Pratt*  
A not-for-profit health system



# Performing Arts Medicine:

ISSUES IN  
DIAGNOSIS AND MANAGEMENT

**A**re you a primary care physician who sees a few performers? Or do you specialize in the care of musicians and dancers? Maybe you are an allied health care professional or performer yourself who would benefit from our sessions. If you are, plan on attending the Medical and Chirurgical Faculty's conference on Friday and Saturday, January 24 and 25, 1992 at the Med Chi Faculty Building 1211 Cathedral Street Baltimore, Md.

Speakers will include Dr. Hunter Fry, an Australian expert in overuse injuries. Dr. Fry has shown continued interest in the growth of arts medicine in Maryland.

*Other speakers include:*

David Sternbach, L. C. S. W.; Richard Norris, M. D.; and committee members Emidio Bianco, M. D.; Sandra Bishop; Scott Brown, M. D.; Ruth Drucker; David Fetter; Norman Rosen, M. D.; Leo Rozmaryn, M. D.; and Charles Silberstein, M. D.

Medical  
and Chirurgical Faculty  
of Maryland






# Medical and Chirurgical Faculty's Committee on Medicine and the Performing Arts Conference

Friday & Saturday January 24 & 25, 1992

Med Chi Faculty Building  
1211 Cathedral Street Baltimore, Md

## Topics to be covered include:

- Soft tissue and overuse injuries of instrumentalists
- Epidemiology of performance related problems
- Approach to the performing artist as a patient
- Medicolegal issues in the performing arts
- Medical problems in the training of the young dancer
- Prevention and treatment of performance anxiety
- Orthotics and instrument adaptations
- Myofascial pain syndromes in the musician



There will be a panel of professional musicians covering the fields of classical, jazz, and rock music who will discuss and respond to questions regarding the musician's role in society and special career demands in their particular area. Three concurrent roundtables covering vocal medicine, dance medicine, and instrumentalists' problems will include case presentations by local experts. Steve Turley, a guitarist from Peabody Conservatory, will give a short lecture-concert.

The conference will run from approximately 12:30 to 5:00 p.m. on Friday and 8:30 a.m. to 5:00 p.m. Saturday.

The Medical and Chirurgical Faculty of Maryland is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.



## REGISTRATION FORM

Performing Arts Medicine: Issues in Diagnosis and Management  
January 24-25, 1992

**Physicians - \$50.00**

Tuition assistance available.

**Allied Health - \$35.00**

**Students and Musicians - \$15.00**

Name:

(Please Print)

Last

First

Address:

City:

State:

Zip:

Phone: ( )

Component Society (County):

Maryland License #:

Form of Payment

☐ Check (payable to Med Chi)

☐ Visa

☐ Mastercard

Credit Card #:

Exp. Date:

Signature:

Return this Registration Form and your payment to:  
Med Chi 1211 Cathedral Street/Baltimore, MD 21201-5585

For additional information...

Contact Susan Harman at (301) 539-0872

Monday through Friday, 9:00 a.m. to 5:00 p.m.

Toll free in Maryland 1-800-492-1056

FAX 301-547-0915



### **The Treatment of Sleep Disorders of Older People: Summary of the National Institutes of Health (NIH) Consensus Statement**

**I**t has been estimated that over half of the twenty-nine million people now over the age of sixty-five experience some disruption of sleep. These disturbances of sleep may be caused by many factors such as retirement and changes in social patterns, deaths of spouses and close friends, increased use of medications, and changes in circadian rhythms. Although changes in sleep patterns have been viewed as part of the normal aging process, new information indicates that many of these disturbances may be related to pathological processes that are associated with aging.

During aging, the amount of time spent in deeper levels of sleep diminishes, and there is an associated increase in awakenings during sleep and in the total amount of time spent awake during the night. In carefully screened, medically healthy, older subjects, there are relatively few individuals who have symptoms related to these changes in sleep and in the distribution of sleep and waking behaviors. Many older individuals, however, suffer from a variety of medical and psychosocial problems, and these are very often associated with disturbances of sleep. These include psychiatric illnesses, particularly depression; Alzheimer's disease and other neurodegenerative diseases; cardiovascular disease; upper airway incompetence; pulmonary disease; arthritis; pain syndromes; prostatic disease; endocrinopathies; and other illnesses.

In an effort to assess the current knowledge on what changes in sleep are clinically important, how sleep disorders are best diagnosed and treated, and how the public can establish good sleep practices, the National Institute on Aging and the National Institutes of Health (NIH) Office of Medical Applications of Research convened a Consensus Development Conference on the Treatment of Sleep Disorders of Older People, which was held on March 26-28, 1990. Based on scientific presentations and discus-

sions from physicians, scientists, health care professionals, and the general public, a thirteen-member panel wrote a consensus statement. Following are highlights of the panel's findings:

Diagnostic evaluation begins with the recognition of a potential disorder by patient history or physician suspicion. Screening questions should include patient satisfaction with his or her sleep; intrusion of sleep or fatigue into daily activities; and complaint by bed partner or other observers of unusual behavior during sleep. A positive response to these questions should trigger a more detailed history of the onset, severity, duration, and pattern of the complaint, and lead to a differential diagnosis. A careful medical history is needed to determine the presence and severity of concomitant disease. Prescribed medications, especially sedatives, alcohol use, and self-medication can all have a significant effect on sleep and may impair cardiopulmonary mechanisms during sleep. Psychiatric history and evaluation identify anxiety, depression, or major life events which are known to affect sleep habits or hygiene. In some cases, the use of a patient sleep log to evaluate sleep/wakefulness patterns will serve to identify rhythmic or circadian disturbances or to document the magnitude of sleep intrusion into daily activities. Appropriate physical examination will depend upon the nature of the complaint and history elicited from the patient. Given additional training and education, primary care physicians should be capable of initial assessment and management of the majority of sleep disorders presenting in the older population. When necessary, referrals should be made to individuals, or a center with recognized skills, in the indications for and application of more specialized tools and recommendations for therapy.

The goals of therapy of sleep disorders can be classified as: reducing morbidity; reducing excess mortality; and im-

### **The Treatment of Sleep Disorders of Older People: A Response**

**S**leep is a universal phenomenon, yet despite the fact that many of us spend one-third of our lives in this behavioral state, the mechanisms, function, and norms of sleep are poorly understood. There are now over 200 sleep referral centers attempting to answer these and other questions. Sleep research is in the early phases of development and the elderly population is most often underrepresented. Published work in this area largely reports results of research with sleep center

referral patients and volunteers. However, sleep complaints rank second to the common cold as a reason for visiting the doctor.<sup>1</sup> Furthermore, there were twenty million prescriptions for hypnotics written in 1985, with 66 percent more prescriptions written for those over the age of sixty-five as compared with the forty to sixty year age group. It is axiomatic that the quality of life of elderly people depends on maintenance of maximum daytime alertness. Yet, the



proving quality of life for patient and family. The two primary types of complaints or disorders, for which there is evidence to suggest that treatment is beneficial are: the hypersomnias, primarily represented by obstructive sleep apnea; and the insomnia complaints, which can be due to a variety of psychiatric and medical disorders.

Obstructive sleep apnea is a potentially reversible cause of daytime hypersomnia, which may be associated with co-morbid conditions and even excess mortality. Effective treatment is available for many patients. At the present time, considerable reliance is made on clinical judgment to initiate a therapeutic trial or regimen. These include weight loss; avoidance of alcohol, sedatives and hypnotics; the avoidance of the supine sleeping position; and management of nasal and nasopharyngeal disease. The mainstay of treatment is the use of nasal continuous positive airway pressure (CPAP). Uvulopalatopharyngoplasty has been reported to be successful when other measures have failed or are unacceptable. In all therapeutic interventions, there should be long-term outcome assessment.

Complaints of insomnia are very common in the older patient. Insomnia is a symptomatic expression of a constellation of medical conditions that are not entirely related one to another. Insomnia may be of psychiatric, pharmacological, or of medical origin. Since insomnia has many causes, the indications for treatment are dependent on the etiology. A thorough medical evaluation is essential prior to initiating treatment. Indications for therapy will be driven by the underlying cause and severity of symptoms. Hypnotic medications should not be the mainstay of treatment of insomnia. Short-term intermittent use of hypnotics and sedative tricyclics may be useful for temporary problems such as bereavement, dislocation, and situational anxiety. There are no studies which demonstrate their long-term effectiveness. Given the changes in drug metabolism associated with increasing age, all medications should be used with caution, especial-

ly those with long half-lives. Other general measures, such as sleep hygiene, can be used as adjuncts to treatment of the specific causes of insomnia and tried when the cause is not clear or is unspecified. Sleep hygiene measures include regularization of bedtime, generally later rather than earlier; the use of the bedroom primarily for sleeping; exercise; avoidance of alcohol and caffeine; reduced evening fluid intake; and in the case of esophageal reflux, elevation of the head of the bed.

Education about sleep and sleep disorders of older people must be directed at all segments of the population. Physicians and medical students, nurses, social workers, and other allied health professions need particular educational emphasis. They should be informed of the concepts of sleep physiology and pathophysiology, and assessment and differential diagnosis. For audiences unfamiliar with the issue of sleep and the older person, the magnitude of the personal and societal toll in accidents, health, and unhappiness must be conveyed. Other key points include proper use of medications, preventive health measures, and good sleep hygiene practices. Sleep complaints should be taken seriously and appropriately treated. Troubled sleep particularly affects the lives of older people. It can exacerbate illness and cause frustration, confusion, and depression. Many people accept sleep disturbances as part of the normal aging process. It is necessary to determine what is normal and what is disease. Basic research, especially using the powerful new techniques of modern biology, is critical to the understanding of the brain mechanisms of sleep and sleep disorders associated with aging.

Free single copies of the complete *NIH Consensus Statement on Treatment of Sleep Disorders of Older People* may be ordered from the Office of Medical Applications of Research, National Institutes of Health, Building 1, Room 260, 9000 Rockville Pike, Bethesda, MD 20892, (301-496-1143).

daytime consequences of hypnotic medications in the elderly include impaired cognition, reduced psychomotor function, and a much higher prevalence of injurious falls.

The *National Institutes of Health (NIH) Consensus Statement* responds to key questions related to this issue. The major conclusions of the consensus group were:

—Typical changes in the pattern of sleep occur during aging. Less time is spent in deeper levels of sleep, and there is an associated increase in awakenings during sleep.

- The high incidence of concomitant medical and psychiatric illness contribute to sleep disturbances.
- Many prescription drugs taken by the elderly have a primary disruptive effect on normal sleep and a secondary effect on sleep patterns because of side effects.
- Primary care physicians, in general, should be capable of initial assessment and management of the majority of sleep disorders presenting in older people.
- To determine etiology, the evaluation of sleep complaints should be approached in a comprehensive fashion.

- Polysomnography and multiple sleep latency tests are indicated when the diagnosis of sleep-related breathing disorders, narcolepsy, or periodic movements of sleep is suspected.
- The indications for the treatment of sleep disorders is not well studied. There is evidence that treatment is beneficial for the hypersomnias and some of the disorders of initiating and maintaining sleep.
- Obstructive sleep apnea is an important condition to identify since it may be associated with significant co-morbid conditions and excess mortality; treatment is recommended for more severe degrees of this disorder. Objective indices of severity include a high index of respiratory disturbances per hour, repetitive episodes of oxygen desaturation, and an abnormally short sleep latency.
- Insomnia is a symptomatic expression of a constellation of medical conditions that are not always related to one another. It has many causes, and indications for treatment are dependent on etiology.
- Periodic movements of sleep (PMS) appear to be very common in the elderly. However, there is insufficient evidence to indicate whether the disease state or its treatment affect morbidity.
- Insomnia may also be related to circadian rhythm disturbances. Such alterations happen during shift work or changes in daily routine that may occur with institutionalization, for example.
- General measures to improve sleep hygiene can be used as adjuncts to treatment of insomnia. These include regularization of bedtime, the use of the bedroom primarily for sleeping, reduction in evening fluid intake, avoidance of pre-sleep alcohol and caffeine and, in the case of esophageal reflux, elevation of the head of the bed.
- Nasal continuous positive airway pressure may be successful for treatment of hypersomnia. Other therapeutic interventions, such as loss of excessive weight, avoidance of alcohol, sedatives and hypnotics, and the avoidance of a supine sleeping position, may also be helpful. There is insufficient evidence to suggest that surgical procedures, except in individual cases, are indicated or beneficial.

It is abundantly clear that sleep-related disorders and complaints in older people pose a significant problem. Presently,

controversy exists concerning the causes, diagnosis, assessment, and specific treatment of sleep disorders in the elderly. Current knowledge is less than comprehensive about changes in sleep and wakefulness as a function of aging or as a result of disease. There is need for basic epidemiologic descriptive studies, natural history cohort studies, standardization of data collection, and outcome studies. The information developed in these studies will aid in the understanding of the natural history, etiology, and prevention of sleep disorders. Sleep, like pain, should be regarded as a symptom, often with a treatable underlying cause. There is no evidence that long-term or continuous use of benzodiazepine hypnotics improves length of time asleep or quality of sleep. These medications are indicated for short-term use for temporary problems such as bereavement or situational anxiety. Given the changes in drug metabolism associated with increasing age, these medications should be used with caution. As in other conditions, a rational approach to diagnosis is required before empiric therapy, which may be harmful, is instituted.

Guidelines such as those developed by the *NIH Consensus Conference on Sleep Disorders of Older People*<sup>2</sup> are tools for clinical decision-making in practice. It is clear, however, that "the appropriate use of guidelines requires that they be based on sound science and serve the ethical purpose of making the significance of choice clear to physicians and their patients."<sup>3</sup> The NIH guidelines present reasonable options available for these disorders. However, it is important that patients' preferences are considered in deciding investigation and treatment courses, and these preferences can rarely be taken into consideration by meetings of experts in the field. To ensure that patients receive the most effective treatment, physicians must consider patients' treatment preferences as well as informing them of the scientific basis of the available options.

### References

1. Daly MP. Sleep disorders in the elderly. *Primary Care* 1989; 16(2):475-88.
2. NIH Consensus Development Conference Consensus Statement. The Treatment of Sleep Disorders of Older People. March 26-18, 1990.
3. Wennberg JE. Unwanted variations in the rules of practice. *JAMA* 1991; 265(10):1306-07.

MEL P. DALY MD

Dr. Daly is Director, Division of Geriatric Medicine, Department of Family Medicine, University of Maryland, Baltimore, MD. ■



### Gastric Tumors

A variety of tumors arise from different histologic tissues that constitute the wall of the stomach. These lesions can be silent and are found incidentally at surgery or autopsy or can become symptomatic and be diagnosed clinically. Symptoms do not differentiate benign from malignant tumors, and they may vary from mild epigastric discomfort to pain, bleeding, obstruction, and loss of weight. The availability of fiberoptic gastroscopy and special upper gastrointestinal (GI) radiological studies allows visualization of the exact location and extent of the lesion in over 90 percent of cases and permits biopsy of the tumor. Computed tomographic (CT) scanning of the abdomen has been helpful in establishing the extent of the disease — especially outside the stomach and in the retroperitoneal space or liver metastases in malignant lesions — prior to surgical intervention. A CT scan also can be used in follow-up of patients and for controlled needle biopsy to establish a tissue diagnosis. Some malignant tumors may produce tumor markers such as alpha-fetoproteins, but mainly they produce other carcinoembryonic antigens (CEA). Such markers can be used for the follow-up of these patients by periodically comparing the preoperative levels with the postoperative values.

#### Mucosal Tumors

**Polyps.** These are the most common benign mucosal lesions and are especially common in the elderly. There are two main varieties. The regenerative type, also known as hyperplastic or inflammatory, comprises 75 percent of gastric polyps. These are usually multiple and correspond to an entity described by Menetrier as *polyadenomes polypeux*; there is approximately an 8 percent chance of co-existing carcinoma.<sup>1</sup> The adenomatous polyp is usually single, large, and located in the antrum; almost 60 percent of these patients have a coexisting carcinoma.<sup>2</sup> A single polyp can be snared via endoscopy and thoroughly studied histologically. The patient has to be observed for recurrence and cancer. Multiple polyps must be treated by gastrectomy. If the disease is localized, partial gastrectomy is performed; however, if it is widespread throughout the stomach or is persistent Menetrier's disease, total gastrectomy is in order.

**Carcinoma.** Adenocarcinoma is the most common malignant gastric tumor. The most common precancerous lesions are severe dysplasia of the mucosa, atrophic gastritis, intestinal metaplasia, and severe adenomatous dysplasia. Among the risk factors are duodenogastric reflux of over ten years' duration, nitrosocompound intake in the diet, adenomatous polyps, achlorhydria, and immunologic gastritis as occurs in pernicious anemia. It is more common in the sixth decade of life and more common in men, with a male to female ratio of 2:1. Endoscopy and detailed upper GI series examinations

have yielded a 5 percent detection rate of early carcinoma, localized to the mucosa and submucosa only, with no lymphatic spread. Surgical cure is over 90 percent in those cases. The primary treatment for all gastric carcinoma is surgery — radical subtotal gastrectomy or radical total gastrectomy. Palliative gastrectomy plays a role in prolonging survival.

Two chemotherapy programs have been claimed to be effective in metastatic disease. These include 5-fluorouracil (5-FU) + Adriamycin + mitomycin-C (FAM), and 5-FU + cytosine arabinoside (Ara-C) + mitomycin-C, with a 20 to 50 percent response rate of twenty to thirty weeks' duration. Adjuvant chemotherapy, utilizing 5-FU plus methyl-CCNU (lomustine), administered four weeks after curative surgery to prevent or delay recurrences and metastases, showed some improvement in survival in one study and no benefit in another.<sup>3</sup>

Squamous cell carcinoma is usually encountered at the cardiosophageal junction and is of esophageal origin, with secondary invasion of the proximal end of the stomach.

#### Intramural Tumors

Tumors originating within the stomach wall proper can be categorized according to their origin.

**Smooth Muscle Tumors.** Leiomyoma is the most common benign tumor. Sometimes it cannot be differentiated from malignant leiomyosarcoma and leiomyoblastoma. These tumors tend to protrude intraluminally with stretching of the overlying mucosa and occasional mucosal ulceration. Small tumors are treated by wedge resection with 2 to 3 cm margins. Larger tumors are treated by partial gastrectomy. The malignant variety is treated by radical partial gastrectomy. Metastases are usually bloodborne and are treated mainly by chemotherapy: doxorubicin (Adriamycin), actinomycin-D (Cosmegen), and vincristine (Oncovin) or a combination of these.

**Malignant Lymphomas.** These may be primary tumors of the stomach or secondary to lymphomas of lymph node origin, with direct invasion from neighboring lymph nodes or by metastases. They usually protrude intraluminally, causing stretching of the mucosa; later, they ulcerate and invade the mucosa. Primary lymphomas of the stomach are usually histiocytic or of poorly differentiated lymphocytic type, i.e., non-Hodgkin's type. Lymphomas of the stomach should be surgically resected to eliminate the site of gastric lymphoma prior to the initiation of radiation therapy or chemotherapy. This is to avoid sloughing of the tumor site that may result in bleeding or perforation and peritonitis. During surgery, the extent of the disease should be determined. Pseudolymphoma is a benign lymphoid hyperplasia that should be differentiated from lymphoma and plasmacytoma of the stomach, a malignant systemic disease.

## Maryland Oncology Newsletter

**Lipomas.** These are rare tumors and are treated by local excision.

**Carcinoid Tumors.** These are usually argyrophilic, are a derivative of the foregut carcinoids, and can be associated with multiple endocrine adenomatosis. They can be single or multiple. Some of these tumors are secretors, giving rise to clinical symptoms of the carcinoid syndrome. Such tumors are yellow or tanned submucosal nodules. Surgery is the primary treatment for these tumors even in the presence of metastases. Small tumors of up to 1 cm can be locally resected. Tumors greater than 1 cm should be treated as carcinoma in the absence of metastases. Patients with metastases who have the carcinoid syndrome can be treated symptomatically according to the clinical presentation.

Carcinoid tumors of the stomach may be associated with peptic ulcers or diarrhea. Flushing is common and usually occurs after meals as a vivid red discoloration which is patchy initially and then becomes confluent. Flushing can be controlled by alpha-adrenergic blockers such as phenoxybenzamine (Dibenzylamine): 10-20 mg per day to block kinins. Also, prednisone, methyl dopa (Aldomet), chlorpromazine (Thorazine), and antiprostaglandins such as aspirin and indomethacin (Indocin) have been beneficial. Actual tumor control by chemotherapy with 5-FU and streptozocin (Zanosar), or cyclophosphamide (Cytosan) and streptozocin, gives a 30 percent positive response rate for a short duration.

**Glomus Tumors.** These are rare benign tumors formed of fibrovascular tissue and are treated by local excision.

**Ectopic Pancreatic Tissue.** These are usually present in the pyloric region and may cause obstruction. They are treated by surgical resection.

### Serosal Tumors

**Peritoneal Mesotheliomas.** These tumors are rare. The visceral peritoneum of the stomach can be the site of benign solitary tumors or can be involved in the diffuse malignant type. Surgical resection should be carried out if at all possible. Doxorubicin (Adriamycin) is being tried in the treat-

ment of advanced malignant mesotheliomas with varying results.

**Metastatic Carcinomas.** Carcinomas, particularly breast, lung and melanoma, also can invade the gastric serosa as part of generalized peritoneal spread. This is commonly encountered from ovarian, breast, and lung cancers and from melanoma. Such tumors can invade the stomach wall and penetrate it throughout its thickness. Surgery is indicated for palliation, but principal therapy is directed to controlling the primary disease.

**Desmoid Tumors.** These unusual tumors also may invade the stomach. They should be resected with safety margins in the hope of preventing recurrences. Multiple recurrent tumors that are not resectable can be treated by Adriamycin.

Serosal tumors can deeply invade the stomach wall, displacing the mucosa which may later ulcerate intraluminally.

### References

1. Ming SC, Goldman H. Gastric polyps: Histogenetic classification and its relation to carcinoma. *Cancer* 1965; 18:721-6.
2. Tomasulo J. Gastric polyps: Histologic types and their relationship to gastric carcinoma. *Cancer* 1971; 27:1346-55.
3. Higgings GA, Amadeo JH, Smith DE et al. Efficiency of prolonged intermittent therapy with combined 5-Fluorouracil and methyl-CCNU following resection for gastric carcinoma. A Veterans Administration Surgical Oncology Group Report. *Cancer* 1983; 52:1105-12.

E. GEORGE ELIAS MD, PHD

Professor of Surgery and Oncology  
Director, Surgical Oncology Program  
University of Maryland

*Tumor conferences are held weekly on Tuesday between 8 and 9 am in Room NBW74 at the University of Maryland Medical System. Physicians are welcome to attend this open meeting and to present cases and pathology slides. Call 301-328-5224 by noon Monday to be placed on the schedule. Surgical Oncology Program, University of Maryland Medical System, Room N13E02, Baltimore, MD 21201.*

### Physician Placement Services

The Medical and Chirurgical Faculty of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals, and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to:

**Physician Placement Service**  
1211 Cathedral St., Baltimore, MD 21201-5585  
(301-539-0872)

Physicians wishing to locate in Maryland are invited to submit a resume to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities in Maryland. **MMJ** announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.



## A Clinical Moment With... Diabetes

### Alternatives to the Injection of Insulin

*Doctor, I understand that my blood glucose can no longer be controlled with oral agents or sulfonylurea drugs because I am unable to control my habit of eating excessively and irregularly. You recommended that I begin insulin injections last month and I did, but continuing that routine is almost impossible. What about nasal inhalation of insulin, insulin in pellets to be taken orally, or the "no needle" spray of insulin of which I have read? What about the surgical procedures done to the intestinal tract to cause weight loss? I have even heard of wiring the jaws to prevent excessive eating. Even though I take insulin injections with a #29 needle so that it doesn't hurt, the process is too emotionally disturbing to continue. I am in constant fear of having a hypoglycemic reaction and passing out.*

In regard to queries of this type, physicians need to review options to taking insulin injections with their obese patients who have non-insulin dependent diabetes. They need to be told that in this type of diabetes, there is an adequate amount of insulin in the body, but that the patient's obesity prevents the insulin from lowering the blood glucose and being properly utilized. The sulfonylurea drugs will help the insulin become more effective and if the patient is cooperative with exercise and a proper meal plan, using one of these agents may be effective for many years.

If the patient is not able to follow a proper meal plan, the sulfonylurea drugs will not have a fair trial. The next option is administration of insulin. Nasal insufflation of insulin, slow release of insulin from fatty pellets in the intestine, and insulin injections by needleless "jet" or "hypospray" are all alternative methods to the subcutaneous injection. The first two are really experimental and clinical use preparations are not available. The "jet" injector method is available, although it is less accurate and more painful, expensive, and difficult than the subcutaneous method. For immunization therapy on a large scale, however, this method of injection is useful. I

have had several patients use this method briefly, but all elected to return to the syringe and needle technique of their own volition.

The surgical techniques for weight control such as stapling, intestinal bypass, or balloon inflation in the stomach have each had their period of popularity but are rarely used at present. Even if one of the surgical techniques were to be considered, the patient should have extensive psychiatric screening and support throughout the program. A surgical alteration is not a permanent procedure, but will be reversed at some future time.

It may be necessary to be forthright and direct with some patients. For example: "Let us accept a few facts. You have never lived a life of any degree of regularity, have never tried to exert any willpower over your eating, and have never wanted to exercise. Your affluent and easy life has been a great disadvantage to your health. Your need to take insulin injections is the first time in your life that you have not been able to buy a cheaper or easier way to get around a problem. If you will accept that you have poor living habits and are willing to seek help in the form of group counseling,\* behavior modification and psychiatric support, I believe insulin injections can be discontinued after a month of cooperative therapy. It does not mean that you have to do it alone. It means that you need to look after your own health. If you do that and also enlist the aid of health care professionals and your family, better health is bound to follow. Otherwise, you must become resigned to take insulin injections for the foreseeable future."

DEWITT E. DELAWTER MD  
Editor

\*An ideal group consists of ten to twelve persons meeting at least once weekly for a period of three to six months and led by an experienced staff person under the supervision of a psychiatrist or psychologist. The programs advertised extensively on radio and television are not to be recommended. ■

#### Hotline Numbers for Impaired Professionals

Physicians — 727-0120  
Dentists — 964-2275  
Attorneys — 685-7878  
Pharmacists — 727-0746  
Emergency Psychiatric Beds 800-492-0610

#### ✉ Authors of Articles ✉

Along with manuscripts submitted to **MMJ**, please send an IBM compatible floppy disk, with the document entered in Word Perfect or an ASCII format.



# COMING OUT OF THE DARK

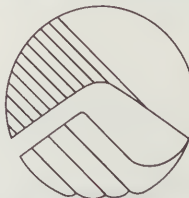
Med Chi's Physician Rehabilitation Committee deals with the substance abuse and mental health problems of Maryland physicians, with a confidential and nondisciplinary focus...Addiction, Marital/Family Conflicts, Psychiatric Illness, Organic Impairment, Physical Handicap...If these problems exist, we can help find the solution. Call us.

The Physician Rehabilitation Committee of Med Chi is available to all Maryland physicians, and their families.

The Committee is NONDISCIPLINARY and information is kept CONFIDENTIAL. If you, a colleague, or family member is in need of our services call (301)962-5580 or call toll free (800)992-7010, or leave a message 24 hours a day, 7 days a week at (301)727-1020.

*HELPING IS OUR BUSINESS...All donations to the Physician Rehabilitation Committee are used for the delivery of services to Maryland physicians in need of help. If you wish to help further the work of the Committee through a tax deductible donation send your check to: The Medical and Chirurgical Faculty Charitable/Educational Foundation, 1204 Maryland Avenue, Baltimore, Maryland 21201 Please note on your donation: "Physician Rehab"*

Medical  
and Chirurgical Faculty  
of Maryland



**Physician  
Rehabilitation  
Committee**



# We Need A Doctor In The House

When the Maryland General Assembly convenes in Annapolis for its 1992 session, the Medical and Chirurgical Faculty will be there. Since 1964, Med Chi has staffed the first aid facility operated during the 90-day legislative session. Come join us at the state capitol building, see the laws being made first hand. One doctor a day is all that is needed to care for the public, the legislators, and their staffs. Take advantage of the opportunity to donate something priceless, your time.

Please detach the postcard located at the top of this page, fill it out and mail it. A confirmation card will be sent to you explaining the details. You will be carrying on a tradition established by the medical community for the people of Maryland.

## Doctor of the Day 1992



Note: All Monday dates are evening sessions, beginning at 4:00 p.m. and ending at 9:00 p.m. For more information, call Bernadette LaRue at Med Chi's Legal Department, 301-539-0872 or call toll free in Md. at 1-800-492-1056.

Your time can make a difference.

## Auxiliary

### Holiday Sharing Card Benefits the American Medical Association Education and Research Foundation

The American Medical Association Education and Research Foundation or, as we know it, AMA-ERF, has become the major philanthropic institution of organized medicine in the United States. Of the many worthy causes to which we contribute yearly, both at national and local levels, few can match AMA-ERF in providing such lasting and important benefits for medicine in Maryland and the public at large. We, the medical family, must respond to the needs of our medical schools in their efforts to assure the delivery of quality medical education to our physicians of tomorrow, and support the advancement of research in many areas including alcoholism, drugs, arthritis, neuromuscular diseases, cardiovascular diseases, and pulmonary diseases.

*But... not by contributions alone!* Although AMA-ERF is classified by the Internal Revenue Service as a 501(c)(3) and a 509(A)(1) organization indicating that gifts are regarded as charitable contributions to a public foundation, much time and diligent effort are expended by medical auxiliaries nationwide in raising funds to supplement the contributions.

By far, the most lucrative and successful national project, adopted by many state and county medical auxiliaries, is the **Holiday Sharing Card**. This is a flexible tool for any major holiday or occasion, although it is customarily used during the Christmas season.

The mechanics of this project are easy but, as with any major venture, they do require advance preparation, generally beginning in September.

All basic costs associated with the **Holiday Sharing Card** (the card, postage, printing, etc.) are county auxiliary budget items. The cost to the participant is variable, however. Thirty dollars is the estimated minimum cost for an individual to

send cards to other medical friends within the county. All donor checks must be made payable to AMA-ERF.

The card is carefully selected by each county auxiliary president and the AMA-ERF committee chairperson. It may be a commercial card, or one designed by a talented physician or auxiliary or, for a light-hearted touch, a child's holiday drawing. (A conscious effort is made to ensure that card and message are acceptable to all religions.)

An appropriate letter or invitation is circulated to all members of the local medical community, generally including nonmarried physicians, widows, widowers, and retirees. Included in the text of the invitation is the deadline for returns, allowing sufficient time for processing donations before the national deadline of December 1.

It is the donor's privilege to designate the contribution to the medical school of his or her choice; when designating the Student Assistance Fund, the medical school must also be indicated. Contributions for research grants are accepted, and distribution is determined by the Foundation's Board of Directors. All contributions are generally acknowledged by the Foundation.

There has, as yet, been no official news release from national **Holiday Sharing Card** for the 1990-91 year. However, during the 1990 holiday season, eight Maryland county medical auxiliaries and the State board raised a total of \$16,186.

To the members of the medical family, we extend our sincerest thanks to each and all for your continued generosity and support of the AMA-ERF at holiday sharing time.

ELIZABETH A. LINHARDT

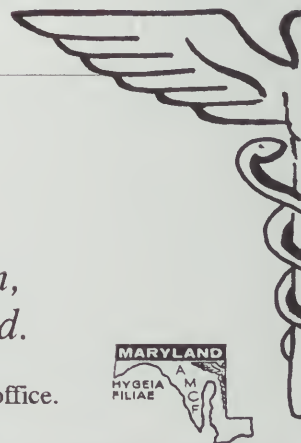
State Chairperson, AMA-ERF, 1990-91

## MARYLAND

*The Auxiliary always welcomes new members.*

*Auxiliary members support the physicians and are recognized for their contributions to health, education, and the promotion of quality health care in Maryland.*

For information on becoming a member, call JoAnn Troisi at Med Chi's Auxiliary office.  
539-0872 (Baltimore area) 1-800-492-1056 (toll free in MD)





### The Holiday Sharing Program of the Auxiliary to the Anne Arundel County Medical Society: 1980-1991

**T**he *Holiday Sharing* program is a joint effort between the Auxiliary to the Anne Arundel County Medical Society and the Department of Social Services, and has been in operation since 1980. The main purpose of this program is to match donors with needy families at Thanksgiving and Christmas. Cards are mailed to all AFDC (Aid to Families with Dependent Children) families in October asking them to register for the program by providing their children's names, ages and sizes, and to give permission to share this information with a donor.

Our donors include churches, schools, businesses, civic organizations, government agencies, and individuals. Letters are mailed to all previous donors each September with a tear-off sheet enabling them to let us know how many families they wish to help. An effort is made to match donors with families in their geographic area. All donors take care of shopping and delivering to their assigned families. Most of the assistance consists of food baskets and toys.

*Holiday Sharing* has grown to almost unmanageable proportions. During the 1990 holiday season, over 4,000 families were logged in through our program. As the project has developed, several large helping agencies, such as the Salvation Army, the St. Vincent de Paul Societies, the Jaycees, and other civic groups, clear their clients' names with us before giving them assistance. Over the years, it was sometimes amusing but also very frustrating to discover the few clients who ended up every holiday with a living room full of food baskets. *Holiday Sharing* now acts as a clearing-house for all of Anne Arundel County and helps to avoid duplication of effort. This results in a fair sharing of all the assistance available from all donors. It also satisfies a donor's need to know that his or her generosity is well and fairly distributed.

In 1989, the Lions' Club of Annapolis joined forces with *Holiday Sharing* and provided toys for 1,200 children. Tags were placed on Christmas trees at all Farmers National Banks. Customers of the banks took these tags and returned them with a new wrapped gift. Annapolis Lions' members collected over 2,400 gifts and brought them to two locations. Many of these gifts were delivered by our large donor groups with their food baskets and most were distributed to the children at Christmas parties at several housing projects.

Also beginning in 1989, Santa Claus Anonymous gift certificates were mailed to 3,800 children throughout the county. These were in the amount of \$10.00 and enabled parents and children to shop for gifts and clothing.

*Holiday Sharing* receives several thousand dollars each year. These funds are used for gift certificates for food and toys for families requesting assistance at the last minute and for special needs identified by social workers. Each year, we are usually able to assist with rent payments, thus helping to prevent eviction for several families. Funds have also been used to help with heating bills and, at one point, to repair a furnace for an elderly couple. In 1990, our new county executive, Robert Neall, took a personal interest in *Holiday Sharing* and was instrumental in obtaining support from the Anne Arundel Trade Council; several members of this group made very large donations resulting in a record total of \$24,000. Because of our economy in 1990, we were receiving many more calls for help than in previous years. Many families were coming to Social Services for the first time in their lives. The extra funds enabled us to help more people than in previous years.

As an adjunct to *Holiday Sharing*, Sarah's House Professional Courtesy Fund was set up in 1989. Letters were mailed to all physicians and dentists in the county requesting that, in lieu of sending a thank you gift to a colleague, they make a donation to the homeless shelter. We have set up an after school tutoring program for the children at Sarah's House and this year began construction of a small park/playground area. Families often stay at the shelter for several months and our goal is to make the lives of the children as normal as possible until they are relocated to their new homes.

This project begins in September each year and involves fifteen to twenty volunteers working a total of 600 hours. In January, thank you letters are sent to all donors, a statistical report is prepared, and all donor cards are filed to be used the following year. Letters are sent to editors of our two local newspapers, giving us an opportunity to thank them for related publicity and to highlight many of our donors. Each year there are twelve to fifteen articles published relating to *Holiday Sharing*; our auxiliary is usually mentioned as the moving force behind the project.

We are seeing an increase in the number of requests for help from senior citizens who are referred to us by the Department of Aging and a social worker. We expect 1991 to be a very demanding year and hope to meet the challenge and continue to expand our program.

IMELDA C. HERZINGER  
Chairperson, *Holiday Sharing*  
Auxiliary to the Anne Arundel County Medical Society

## Board of Physician Quality Assurance Actions

**In the Matter of  
Seward Boyd, Jr. DO  
Before the  
Maryland Board of  
Physician Quality Assurance**

**Surrender of License**

February 11, 1991

Dear Dr. Weiner and Members of the Board:

Please be advised that, in accordance with the understanding and agreement reached between myself and the Board of Physician Quality Assurance (the Board) on January 9, 1991, I have decided to surrender my license to practice medicine in the State of Maryland, license number H36148. I understand that I may not give medical advice or treatment to any individual, for compensation or otherwise, and cannot prescribe medications. In other words, I understand that surrender of my license means that I am in the same position as an unlicensed individual. This decision to surrender my license to practice medicine in the State of Maryland is IRREVOCABLE and public.

This Letter of Surrender shall become a public document and shall become effective immediately upon its acceptance by the Board, that date being the date on which the Board accepts this Letter of Surrender.

My decision to discontinue the practice of medicine in the State of Maryland and to surrender my license has been prompted by an investigation of my practice by the Board. This investigation revealed the following:

1. That on three occasions, I had taken and failed to attain the necessary score required to pass the Federation Licensing Examination (FLEX), which resulted in the denial of my application for medical licensure before the State Medical Board of Ohio on three separate applications, dated August 18, 1982, February 10, 1984, and August 13, 1984.
2. That on or about September 4, 1985, I was found guilty after entering a plea of "no contest" in the Lyndhurst Municipal Court, Cuyahoga County, Ohio, in the matter of *City of Richmond Heights v Seward Boyd*, case number 85CRB439, of practicing medicine or surgery, or any of its branches, without a certificate from the Ohio State Medical Board, in violation of Ohio Revised Code (ORC) §4731.41.

As a result of this conviction, I was sentenced to a term of imprisonment of ninety days, execution of which was suspended in its entirety; and was placed on probation for a period of one year; and was fined \$1,000, of which \$500 was suspended.

3. That on or about September 10, 1986, I was found guilty after entering a plea of guilty in the Court of Common

Pleas, Cuyahoga County, Ohio, in the matter of *State of Ohio v Seward J Boyd, Jr.*, case number CR-205354, of attempted trafficking in drugs, to wit, Tylox, Percocet and Percodan, all classified as Schedule II drugs, during the period January 1983 to June 1985, in violation of ORC §2923.02 and §2925.03.

As a result of this conviction, I was sentenced to a term of imprisonment of one month, execution of which term sentence was suspended; and was placed on probation for a period of six months; was fined \$150.00; and was required to pay court costs.

4. That on or about December 5, 1987, I applied for medical licensure to the Board of Medical Examiners of the State of Maryland, and willfully failed to disclose certain material facts requested in the application, including the criminal convictions relating to the practice of medicine described in sections two and three above; and the fact that I had been denied licensure in the State of Ohio on three separate occasions after having taken the FLEX examination, as described in section one above.
5. That on or about June 9, 1988, I was denied medical licensure by the Composite State Board of Medical Examiners of the State of Georgia, based on the Official Code of Georgia Annotated, §43-34-37(a)(3) and (7) (citing conviction of a crime, issuing illegal prescriptions, practicing medicine without a license, and engaging in unprofessional conduct).
6. That on or about February 4, 1988, I was found guilty after a two day court trial in the Court of Common Pleas, Lorain County, Ohio, in the matter of *State of Ohio v Seward Boyd, Jr.*, case number 33989, of knowingly and unlawfully engaging in the practice of medicine without a certificate from the Ohio State Medical Board during the period July 1985 to November 4, 1986, having been previously convicted of practicing medicine without a license on or about September 4, 1985, all in violation of ORC §4731.41, a felony in the fourth degree.

As a result of this conviction, I was sentenced to a term of imprisonment of one year, execution of all but fifteen days incarceration suspended; and was placed on probation for three years, to end May 13, 1991; ordered to pay a fine of \$1000.00; and ordered to perform 100 hours of community service work.

7. That on or about September 30, 1988, I applied for renewal of medical licensure with the Board, and willfully failed to disclose certain material facts requested in the application, including the fact that disciplinary action had been taken against me by a state board (involving the denial of my application for licensure in the State of Georgia described in section four above; and that I had been convicted in the State of Ohio of knowingly and unlawfully engaging in the practice of medicine without a certificate, as described in section six above.



## Board of Physician Quality Assurance Actions

8. That on or about August 11, 1989, disciplinary action against my license to practice medicine in the State of New York was taken by the New York State Board of Regents, by Order Number 9066, in which I was found guilty of unprofessional conduct within the meaning of NY Educ. Law, §6509(5)(a)(iii) (McKinney 1985).

As a result of this disciplinary finding, my license and registration to practice as a physician in the State of New York was suspended for a period of five years; with the execution of the last four years stayed at which point a four-year period of probation was imposed.

9. That on or about January 8, 1990, I willfully failed to disclose certain material facts requested as part of an application for hospital staff privileges at Naval Hospital, Patuxent River, Maryland. In my application, I failed to disclose the actions taken against my license in the State of New York (as described in section seven above); misrepresented that I had licenses in good standing in Ohio and New York; and failed to disclose that I had been convicted of practicing medicine without a certificate in Ohio (as described in sections two and six above). I withdrew my application for hospital privileges on or about January 24, 1990, while under investigation by the Naval Hospital credentials committee.

10. That on or about September 1, 1990, I applied for renewal of licensure with the Board and willfully failed to disclose certain material facts requested in the application, including the fact that a state licensing board had taken disciplinary action against my license (involving the suspension of my license in New York, as described in section eight above); and that I had voluntarily withdrawn my position from a hospital while under investigation by that institution (involving my withdrawal from employment at the Naval Hospital after providing materially false information on my application for privileges, as described in section eight above).

On Wednesday, December 12, 1990, I received notice, through a meeting with Robert J. Gilbert, Assistant Attorney General, of the Board's vote of November 28, 1990 to summarily suspend my license pursuant to *State Gov't. Code Ann.* §10-405; and to charge me under the Maryland Medical Practice Act (the Act), *Health Occ. (HO) Code Ann.* §14-504. The pertinent provisions of the Act charged under §14-504 provide the following:

Subject to the hearing provision of §14-505 of this subtitle, the Board, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:

Fraudulently or deceptively obtains or attempts to obtain a license for the applicant or licensee or for another; (See HO §14-504(a)(1).)

Is guilty of ... unprofessional conduct in the practice of medicine; (See HO §14-504(a)(3).)

Is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction or plea set aside; (See former HO §14-504(6).)

Willfully makes or files a false report or record in the practice of medicine; (See former HO §14-504(12) and HO §14-504(a)(11).)

Is disciplined by a licensing or disciplinary authority or convicted or disciplined by a court of any state ... for an act that would be grounds for disciplinary action under this section. (See former HO §14-504(22) and HO §14-504(a)(21).)

Grounds for disciplinary action under this section include:

Is guilty of ... unprofessional conduct in the practice of medicine; (See HO §14-504(a)(3).)

Is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude, whether or not any appeal or other proceeding is pending to have the conviction or plea set aside. (See former HO §14-504(6).)

My decision to surrender my license in the State of Maryland has been prompted by my desire to avoid summary suspension under *State Gov't. Code Ann.* §10-405, and to avoid being charged under the Act, HO §14-504. The basis for summary suspension and charges against me would include the results of the investigation as described above.

I understand that the Board will acknowledge to the Federation of State Licensing Boards, and the National Practitioner Data Bank, as is required by Senate Bill 99-660, through this Letter of Surrender, and any response to inquiry, that I have agreed to IRREVOCABLY surrender my license to practice medicine in the State of Maryland. I also understand that in the event that I would apply for a reinstatement of my license in the State of Maryland, or apply for licensure in any other state or jurisdiction, that this letter, and all underlying documents, shall be utilized by the Board to the same extent as a final order which would result from a disciplinary action under the Act.

I affirm that I do not have privileges at any hospital, health maintenance organization, or other health care institution in the State of Maryland. I further affirm that I have a current Maryland Controlled Dangerous Substances Registration Certificate, 030671, expiration date June 30, 1991, issued by the Maryland Division of Drug Control; and a United States Drug Enforcement Administration (DEA) Certificate, BB0907189, expiration date July 31, 1991.

I am also currently licensed to practice medicine in the State of Nebraska, license number 59, issued August 11, 1986; and in the State of New York, license number 169521, issued March 12, 1987. I hereby acknowledge that, on the date that the Board accepts this Letter of Surrender, the Board will send a copy of this Letter of Surrender to Helen L. Meeks,

## Board of Physician Quality Assurance Actions

Director, Bureau of Examining Boards, State of Nebraska, PO Box 95007, Lincoln Nebraska 68509-5007; and to Kathleen Tanner, Director, the New York Office of Professional Medical Conduct, New York State Department of Health, 438 Coming Tower Building, Empire State Plaza, Albany, New York 12237-0614.

Before the Board accepts this Letter of Surrender as a resolution of this matter, I must present to the Board: Maryland license H36148, including the wall license, any renewal certificates and wallet-sized renewal cards; Maryland Controlled Dangerous Substances Certificate Number 030671, including any prescription pads bearing my name and any prescription ordering forms in my possession or under my control; and United States DEA Registration Certificate BB0907189. I acknowledge that on the date that the Board accepts this Letter of Surrender, the Board will send a copy of this Letter of Surrender to both the State of Maryland Division of Drug Control and the United States DEA, attesting that I am surrendering my privilege to prescribe controlled dangerous substances in the State of Maryland. I further acknowledge that I will submit a signed, executed copy of DEA form 104, Voluntary Surrender of Controlled Substances Privileges, which will be forwarded to the United States DEA.

Finally, I wish to make clear that I have consulted with an attorney before signing this Letter of Surrender IR-REVOCABLY SURRENDERING my license to practice medicine in the State of Maryland. I understand both the nature of the charges against me and also this Letter of Surrender fully. I make this decision knowingly and voluntarily.

SEWARD BOYD, JR., DO

On behalf of the Board of Physician Quality Assurance, on this 11th day of February, 1991, I accept Seward Boyd, Jr. DO's surrender of his license to practice medicine in the State of Maryland.

ISRAEL H. WEINER, MD, Chairperson  
Board of Physician Quality Assurance

## INFORMATION FOR AUTHORS INFO

Manuscripts may be sent to Editor, *MMJ*, 1211 Cathedral St., Baltimore, MD 21201-5585. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by editorial board members and guest reviewers.

### Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references), with pages numbered consecutively. Along with manuscripts, please send an IBM-compatible floppy disk, with the document entered in a WordPerfect or ASCII format.

Include full name of author(s) with highest degrees and academic or professional titles.

Tables with brief descriptive titles are to be typed on separate sheets of paper and numbered. The Editor reserves the right to edit tables. Statistics must be consistent in both tables and text.

An introductory synopsis of approximately twenty-five to fifty words is required.

References are limited to those citations noted in the text and are to be typed double-spaced and numbered consecutively as they appear in the text. The number of references generally is limited to twenty in major contributions and fewer in shorter articles. Personal communications and unpublished data should not be included.

Photographic material must be submitted as high-contrast glossy prints. Drawings and graphs must be of professional quality. Recognizable photos of patients are to be masked and should carry with them written permission for publication.


For more extensive information about preparing medical articles for publication, see *Uniform Requirements for Manuscripts Submitted to Biomedical Journals* compiled by the International Committee on Medical Journal Editors (available through the *Annals of Internal Medicine*).

Permission: When material is reproduced from other sources, full credit must be given to both the author and publisher, and written permission from these sources must be included when the material is submitted.

Copyright: Material published in *MMJ* is protected by copyright and may not be reproduced without the written permission of both the principal author and *MMJ*.



Page proofs will be mailed to the principal or corresponding author and, if not returned by the specified date, will be considered approved as typeset. ■




### For a Special Evening

Begin or end a truly special evening in the elegant atmosphere of Med Chi's historic Krause Room.

Directly across from Meyerhoff Symphony Hall and 1 1/2 blocks from the Lyric Opera House  
Available for catered functions everyday.

For information, please call 539-0872 from Baltimore or 1-800-492-1056 toll-free from other Maryland locations.





## Eponyms II

Bart Gershen MD

Now that we've had a modest taste of common eponyms (November 1991, Vol 40, No 11), let's return to the mother of all eponyms — medicine. I should note for the record that all professions have their individual idiom, and most speak a jargon embellished with eponyms. But I assure you that medicine is immersed, saturated, brimming, and overflowing with them.

The majority of eponyms are identifiable as such — for example, **Bright's** disease or **Raynaud's** syndrome. However, there are numerous instances in which recognition is not so easy. For instance, **brownian** motion — the incessant, random microscopic movement of particles in suspension. It was first noticed in 1827 by Robert Brown, a botanist and physician, while observing pollen grains submerged in water. The phenomenon was so fascinating that it engaged the attention of Albert Einstein, who showed that the pressure exerted by surrounding water molecules caused the grains to wobble.

Incidentally, Robert Brown was also the first to publish a work on the flora of Australia, the first to distinguish between gymnosperms and angiosperms in botany, and the first to describe and name the nucleus of the cell.

Then there's the **Golgi** complex or apparatus, that cytoplasmic organelle which sits near the nucleus, manufactures lysosomes, and stores hormones within its secretory granules. It is named for Camillo Golgi, an Italian histologist, who also developed the silver nitrate method of staining nerve cells (now called Golgi cells). That discovery led to the birth of a new specialty — neurology.

**Milkman's** syndrome, spontaneous, symmetrical pseudo-fractures, was reported in 1930 by a radiologist from Scranton, Pennsylvania — Louis Arthur Milkman. It was originally described by a Swiss physician, Emil Looser, and the lesions are occasionally referred to as **Looser** zones.

**Baker's** cyst, like Milkman's syndrome, is unrelated to the food industry. It is named for William Morrant Baker, an English surgeon who operated at St. Bartholomew's Hospital and who, for many years, was Sir James Paget's assistant. In 1877, he described the herniated popliteal bursa to which his name applies. (Incidentally, **Bart's** hemoglobin — an abnormal hemoglobin having four gamma chains — is named for St. Bartholomew's Hospital where it was first detected.)

**Negri** bodies are not black. They are spherical or ovoid eosinophilic inclusions located within the cytoplasm of nerve cells, pathognomonic of rabies, and first observed in 1903 by Adelchi Negri, an Italian physician. Initially, he had been Golgi's assistant, but quickly moved to full Professor of Bacteriology at the University of Pavi. The pathologic material which formed the basis for his conclusion consisted of dogs, rabbits, and cats infected with street virus, a few

lab-infected animals, and one human — a sixty-four-year-old woman who had died of a rabid dog bite. Unfortunately, science did not have this gifted investigator very long. Six years after marrying his colleague Lina Luzzani, and at the age of thirty-six, Negri died of pulmonary tuberculosis.

Bacteria are characterized by **gram** positive or **gram** negative staining characteristics. The stain was discovered by Hans Christian Joachim Gram, a post-graduate student working with Carl Friedlander. One morning Gram accidentally spilled Lugol's solution over a bacterial slide. In attempting to wash it off with alcohol, he made his momentous discovery. (Incidentally, **Lugol's** solution, a mixture of 5 percent iodine plus 10 percent potassium iodide, was initially proposed for the treatment of pulmonary tuberculosis by Jean Guillaume Auguste Lugol. It was found not to be useful, but was thereafter effectively applied to the treatment of thyrotoxicosis by Henry Stanley Plummer, a physician at the Mayo Clinic.)

Plummer, of course, had nothing to do with Watergate. He was half the team of **Plummer-Vinson** whose syndrome consisted of dysphagia and glossitis in iron-deficient, middle-aged women.

In 1951, Dr. George Gey of The Johns Hopkins University established a cell culture from a patient with cervical carcinoma. Today, descendants of that cell line may be found in laboratories all over the world, and are employed to culture viruses. They are known as **Hela** cells — an acronym for the patient from whom they were initially derived — Helen Lacks.

In 1943, a young girl named Margaret Tracy fractured her leg. It was a severe compound fracture which, understandably, became infected. Cultures taken from the wound grew a gram positive, spore-forming rod. Shortly thereafter, a polypeptide was isolated from that organism and found to be, curiously and almost improbably, an antimicrobial substance. The bacteria which had produced this humoral paradox was *Bacillus subtilis*. It became known as the **Tracy I** strain in honor of its immediate host (or hostess). The antibiotic which emanated from that culture was logically named **Bacitracin**.

Other patients have contributed their names to eponymic history. In 1952, Rosemary Biggs and her associates from Oxford, England reported a new hemorrhagic disorder. Resembling classic hemophilia, it was also an autosomal, sex-linked recessive illness. The description was published in *The British Medical Journal* under the title, "**Christmas** Disease; A Condition Previously Mistaken for Haemophilia." A deficiency of clotting factor IX is known to be the underlying etiology, but the disease itself was named for the youngest patient in Biggs' series of seven cases — Stephen Christmas.

Similarly, factor XII was named **Hageman** factor and factor X, **Stuart-Power** factor — each for patients with the specific deficiency.

Friedlander, mentioned above, deserves some recognition for the bacterium he described in 1882 — *Friedlander's bacillus*. Today we refer to it as *Klebsiella pneumoniae*. Its genus name is derived from another outstanding bacteriologist — Theodor Albrecht Edwin Klebs, who is further known for his discovery (with Friederich Loeffler) of the *Klebs-Loeffler bacillus* — *Corynebacterium diphtheriae*. (Greek: *Koryne* — "club" + *Bakterion* — "little rod," i.e., club-shaped rods. And Greek: *diphthera* — "membrane," referring to the pseudomembrane which characteristically forms in the pharynx of infected patients.)

The term **bacillus** derives from Latin *baculus*: "a small staff or rod" — and actually means the same as **bacterium**. The genus *Spirillum* also issues from Latin: *Spira* — "a coil." The word **cocci** originates from *kokkus*, which is Greek for "grain or kernel." (The name was given to this unique organism in 1874 by Theodore Billroth, the father of modern abdominal surgery and a close friend of Johannes Brahms who frequently induced Billroth to guest conduct the Zurich Symphony Orchestra.)

The *Staphylococcus* descends from the Greek: *staphyle* — "a bunch of grapes." The *Streptococcus* is obtained from the Greek: *Streptos* — "twisted, as in a necklace or chain." But the **gonococcus** is an example of lexical error. *Gone* is the Greek word for "seed" (e.g., **gonad**). It was mistakenly presumed that the urethral discharge in **gonorrhea** was due

to the efflux of semen. (*Rheos* is Greek for "flow," therefore a "flowing of seed, or semen." The gonococcus thus having been as erroneously named as the disease it produced.)

*Rheos*, of course, may be found in countless words such as **leukorrhea** (*leukos*: Greek for "white"), **seborrhea** (*sebum*: Latin for "tallow or fat"), **galactorrhea** (*galaktos*: Greek for "milk," which also explains the word galaxy, originally assigned to our collection of local stars — the **Milky Way**), **dysmenorrhea** (Greek prefix, *dys*, denoting "abnormal, difficult, or painful" + *mensis*: Latin meaning "month"), **pyorrhea** (*pyon*: Greek for "pus"), **rhinorrhea** (*rhis*: Greek for "nose," as in **rhinoceros**, the "ceros" resulting from the Greek *keras* for "horny," as in **keratin**. The animal, therefore, is called a horny nose), and **logorrhea** (Greek: *logos* — "word," i.e., a diarrhea of words — something of which this column has occasionally been accused).

Not only is the term **menses** directly from the Latin for month (sometimes referred to as "the monthlies"), but the word **moon** is as well. In fact, **month** derives from moon and refers to the period of one lunar cycle. One may discover this relationship hidden within the expression, **honeymoon**. In early England, it was customary for the newlyweds to share a glassful of mead or honey wine each night for the first month of marriage. Thus, the harmony of their nuptials would be initiated and indelibly imprinted on the marriage. In Italian it is called *luna di miele* — month of sweetness. It is, therefore, the honey month. Or perhaps the honeymoonth.

The Roman moon was also eponymic, named for the goddess Luna. ■

## Doctor, Planning to Relocate?

If you are moving or planning to, let us know so that you won't miss a single issue of *Maryland Medical Journal*. Fill out the form below and mail it to:

Wanda Griebel  
MMJ 1211 Cathedral Street  
Baltimore, MD 21201-5585

### Old Address (or mailing label)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_

Signature: \_\_\_\_\_

### New Address

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Telephone: \_\_\_\_\_

Date Effective: \_\_\_\_\_



## The State of Medicine in the Soviet Union

I recently led a group of emergency physicians to the Soviet Union where we met with our counterparts in emergency medicine and studied the Soviet medical system. We found wide differences between the Union of Soviet Socialist Republics (USSR) and the USA in the way technology is used, the level of technology available, the structure of the system, the priority given to medical care within the society, and the cost of medical care to the society. Despite these differences, however, we found a remarkable similarity in the dedication of Soviet physicians and nurses to the care of their patients and to the professionalism of their chosen field. An overview of our findings is presented here.

### The Soviet Union - A Patchwork of Diversity

As anyone who has not been hibernating for the last five years now realizes, the Soviet Union is a remarkably diverse and variable country. It is nothing like the monolithic uniform gray mass perceived by most Americans before the advent of *Perestroika*. The fifteen republics which make up the USSR are much less culturally integrated than the states of the United States. Many citizens from republics other than Russia do not speak Russian and national cultures range from Oriental to Western European. The Soviet economic system's insistence on centralization exacerbates this diversity. Goods, services, people, and economic activity are concentrated in the largest cities, especially Moscow, because that is where control resides. This leads to a marked contrast between rural and urban life — much more so than in the United States.

A country this size requires a large medical establishment. The Soviet Union has about twice as many doctors as the United States and more than three times as many hospitals. At the same time, however, medical care has received a much lower priority in terms of economic importance than in the United States. This is evidenced by the fact that the Soviet government spends \$96 million a day on health care, while the U.S. government spends \$135 million and the U.S. private sector probably spends two or three times that much. One result is a lack of medical technology outside urban areas.

Seventy-five percent of Soviet physicians are female. The average Soviet physician makes about 300 rubles a month, which at current exchange rates is about \$11. While at first glance this may seem an extreme hardship, one must remember that in the Soviet Union many goods and services are free or heavily subsidized. Nevertheless, in contrast to the United States, the medical profession in the Soviet Union is among the occupations with the lowest pay and status.

### Medical Education in the USSR

Soviet physicians start their medical education at around age seventeen, after graduation from secondary school. They spend seven years in medical school taking medical courses

as well as courses that would be included in a typical U.S. undergraduate education. They then do a one-year internship. After graduation from medical school, they are required to practice three years of primary care. The Ministry of Health assigns them a place and after these three years of "practical medicine," they may, if they want and are able to find a place, go on to specialize. Specialization in the Soviet Union is a much less formal or structured process than in the United States. There are few residencies of specific periods of time with definitive educational requirements. Most specialization is handled more like an apprenticeship, where the student attaches himself or herself to a mentor and spends as much time with the mentor as the student thinks is necessary to master the specialty sufficiently. These positions are virtually all in urban areas which, as in the United States, makes them even more desirable. As you might expect, such positions are relatively few and competition is fierce.

### Medical Technology in the USSR

While medical technology is extremely poor in rural USSR, in major urban areas it approaches Western standards of sophistication. However, the Soviets often use their technology in a much different way than Americans, and the differences are sometimes very interesting. For instance, in the United States there are few hyperbaric chambers — approximately one or two per major metropolitan area. In the Soviet Union, however, virtually every hospital of significant size has one or two hyperbaric chambers and they are used for a wide variety of conditions and diseases (e.g., cardiovascular accidents). These differences in the use of technology also extend to the areas of ultrasound, ultraviolet, and electrotherapy. There is much fertile ground for cooperative research here.

### Health Care Administration

Despite recent attempts at pushing authority down the chain of command, the health care system in the Soviet Union is still very centralized. The Ministry of Health in Moscow directs all health care in the Soviet Union. Through its regional administrations, it controls all of the hospitals and polyclinics in the nation. In visiting these institutions and discussing with health care administrators the problems that beset them, one can not help but notice that health care administration in the Soviet Union is exclusively a male preserve and, most frequently, the reward of surgeons who have climbed through the administrative ranks.

The centralization of health care administration, however, does lead to some beneficial situations not found in the United States. For instance, in large cities such as Leningrad and Moscow, all ambulance dispatch and hospital admissions are coordinated at a central location. Thus, whenever an ambulance calls in with a cardiac care unit (CCU) admission (since all ambulances are staffed with doctors, triage

decisions—including the hospital admission decision—are made in the field), they immediately can be directed to the nearest hospital with a CCU bed. Similarly, a sudden influx of ambulances never overwhelms a single hospital because central dispatch makes sure that ambulance arrivals are evenly distributed. The centralized administration and economies-of-scale also allow the Soviets to concentrate specialty care more so than in the United States. Whole hospitals may be devoted to cardiology or pulmonary care or a particular kind of surgery. There is no incentive for a hospital to try to be all things to all people.

The converse of this, of course, is that the concept of medical choice is unknown in the USSR. A citizen is assigned to a specific polyclinic, and that is where s(he) is expected to go for routine or urgent medical care. Hospital admissions are made only through polyclinics or ambulance arrivals, and all admissions are centrally coordinated. The individual has no choice as to physician or hospital.

### *Perestroika*

The medical changes sweeping the Soviet Union have certainly affected medical care. There is a growing acceptance of the market as a moving force in the delivery of medicine and much interest in Western models of medical care. A number of republics are trying to figure out how to adopt an insurance model of medical care whereby the employer pays for medical insurance for its workers (or, in a health maintenance organization like situation, pays a hospital directly).

In addition, fee-for-service is making rapid progress in the USSR. Statistics suggest that approximately three-fourths of

office visits and hospitalizations in the Soviet Union are accompanied by bribes to physicians for better care. Also, many cooperatives (privately owned business ventures) have hired their own medical staff—at salaries far above the typical salaries offered in state institutions.

*Perestroika* has also spawned a number of would-be medical entrepreneurs. The role model for this has been the ophthalmologist Federov, who pioneered the method of radial keratotomy for the treatment of myopia. He was so successful with his method that the government gave him a hospital in Moscow in which he established an assembly line of operating rooms to perform the procedure. Expanding even further, he outfitted a ship with operating rooms and was able to place it in the Middle East where he could conveniently cater to the desires of wealthy oil sheiks. In no time, he was a legitimate Soviet millionaire. Seeing his example, many other Soviet physicians with skills and resources in demand in the West and Middle East (e.g., kidney transplants) have taken up this idea and are working to produce new exportable medical services.

The Soviet medical system is filled with talented, intelligent people struggling to maintain their nation's health care in the face of deteriorating economic and social circumstances. Their success is certainly not a foregone conclusion, but many of them are finding creative ways to overcome the obstacles of their current system.

**THEODORE E. HARRISON MD, MBA, FACEP**

Dr. Harrison is President of the Maryland Chapter, American College of Emergency Physicians

## Speak Out on Consultation

Consultation, a radio program sponsored by the Medical and Chirurgical Faculty of Maryland allows Med Chl physicians to appear each week on the program to discuss the latest developments in medicine and to answer questions about health issues. Med Chl currently airs two sessions of Consultation:

### **Saturday Evening Consultation**

A live program

Saturday from 5:00 to 6:00 p.m. and 6:00 to 7:00 p.m.

Broadcast across the country

An hour-long program

Call-in format: Physician answers questions from listeners

### **Sunday Morning Consultation**

A pre-taped program

Sunday at 7:30 a.m.

Broadcast on WBAL - AM radio

A half-hour program

Interview format: one-on-one talk with John Stupak

For more information, contact Lori Robinson at 539-0872 (Baltimore area) or at 1-800-492-1056 (toll-free from elsewhere in Maryland).



Call for Papers

# The Medical & Chirurgical Faculty of Maryland

requests papers on the theme

## *Mini-invasion & Megatreatments*

for the  
*1992 Annual Meeting*

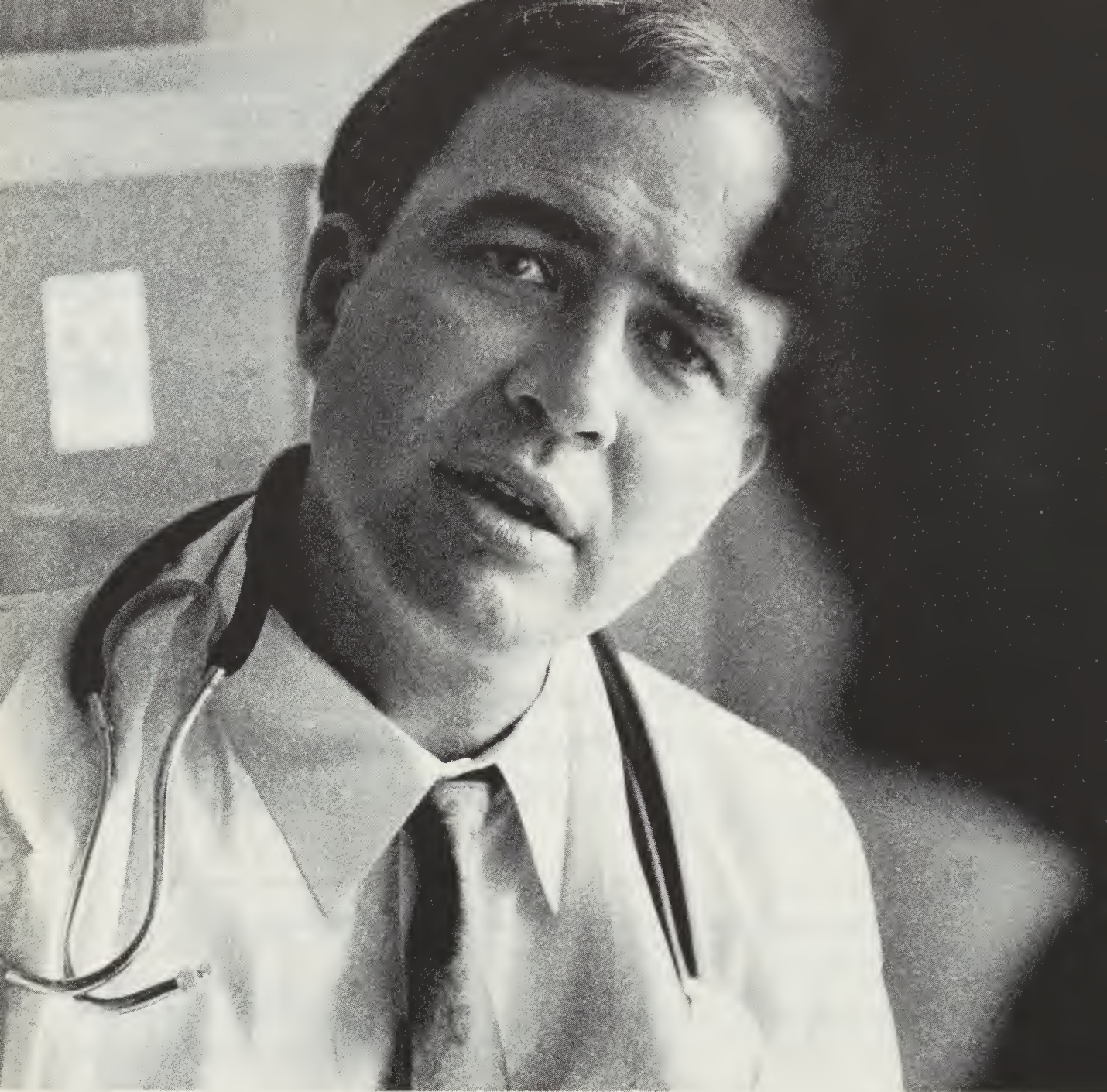
at the  
*Omni Inner Harbor Hotel  
in Baltimore  
Thursday, Friday, & Saturday  
April 30, May 1 and 2*

Over the last few years, the use of scopes has been introduced in surgical and nonsurgical procedures for diagnosis and treatment in a wide range of medical specialties. Because scopes involve minimal incisions and very low morbidity, they are enthusiastically supported by both physicians and patients. This year, Med Chi highlights the promise of this new technology as the theme for its annual meeting: "Mini-invasion and Megatreatments."

Med Chi invites papers dealing with "Mini-invasion and Megatreatments" for consideration by Med Chi's Committee on Scientific Activity and presentation at the 1992 Med Chi Annual Meeting.

For more information call Med Chi's Office of Continuing Medical Education at 301-539-0872 or 1-800-492-1056. Deadline for submission of scientific papers is January 15, 1992.





## "We must make sure that policies are based on facts, not fears."

Dr. Paul Volberding, Researcher, University of California, San Francisco, Member, American Medical Association

Amid the rancor of politics and budget debates, the needs of the patient are often overlooked. And, it is forgotten that it is physicians who know the most about disease and the suffering of patients.

Nowhere is this more true than with AIDS.

"Throughout the history of epidemics, there has been the possibility of reactions and policy based on fear and stigma," states Dr. Volberding.

The American Medical Association (AMA) agrees. The AMA is committed to fair AIDS policies, and to supporting researchers battling not just AIDS, but the countless diseases that ravage our society.

"What impresses me most about the AMA is its

willingness to take public policy positions and its ability to influence opinion," Dr. Volberding adds.

You are invited to join Dr. Volberding and to join with him in his efforts to bring quality health care to those in need. Become a member of the American Medical Association today.

Members of the AMA are encouraged to join their state, county and specialty societies.

**American Medical Association**

Physicians dedicated to the health of America





# Make an Impact with MMPAC

**JOIN THE CAUSE!  
GET INVOLVED!  
GET POLITICAL!**

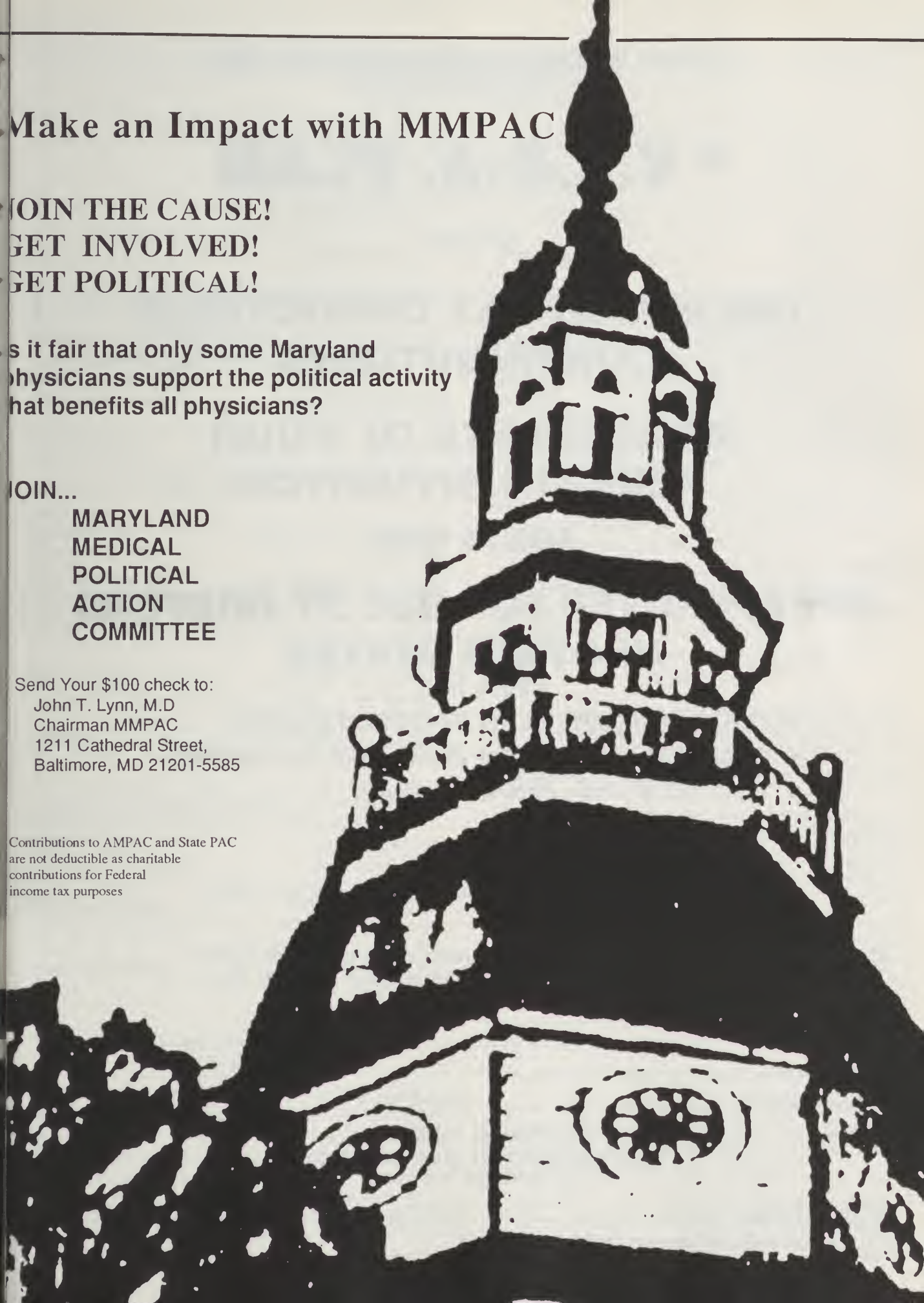
Is it fair that only some Maryland  
physicians support the political activity  
that benefits all physicians?

JOIN...

**MARYLAND  
MEDICAL  
POLITICAL  
ACTION  
COMMITTEE**

Send Your \$100 check to:  
John T. Lynn, M.D.  
Chairman MMPAC  
1211 Cathedral Street,  
Baltimore, MD 21201-5585

Contributions to AMPAC and State PAC  
are not deductible as charitable  
contributions for Federal  
income tax purposes



THE NEWLY IRS APPROVED MEDICAL ASSOCIATION TRUSTS

(Summit Bancorporation, Trustee)

(CoreStates Bank, Trustee)

# **\* V.E.B.A. PLAN**

## **FEATURES**

**UNLIMITED TAX DEDUCTIBLE  
CONTRIBUTIONS**

**REGARDLESS OF YOUR  
PENSION SITUATION**

**AND IS NOW**

**IRS APPROVED FOR USE BY DOCTORS  
IN OTHER STATES**

**EVEN IF . . .**

- YOUR PENSION PLAN IS OVER FUNDED
- YOUR PENSION PLAN IS MAXIMUM FUNDED
- YOU HAVE NO PENSION PLAN

*FOR 1991 TAX CREDIT,  
CONTRIBUTIONS MUST BE RECEIVED IN OUR OFFICE BY 12/31/91.*

---

**PLEASE SEND ME A copy of the I.R.S. "Favorable Letter of Determination"**  
**and other relevant information on your \*V.E.B.A. Plan**

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

DATE OF BIRTH \_\_\_\_\_ TELEPHONE # (\_\_\_\_\_) \_\_\_\_\_

Mail to:

**THE KIRWAN COMPANIES  
402 MIDDLETOWN BLVD., SUITE 202  
LANGHORNE, PA 19047**

**(800) 969-7666 ..... (215) 750-7616 ..... FAX (215) 750-7791**

**\*VOLUNTARY EMPLOYEE BENEFITS ASSOCIATION**



## Council Minutes

### Medical and Chirurgical Faculty of Maryland Council (393rd Meeting) Friday, September 13, 1991 Carousel Hotel, Ocean City, Maryland

(At press time, the minutes were unapproved.)

Council Chairperson, Marvin Schneider MD, called the meeting to order at 3:10 pm. The Council approved the minutes of its July 18, 1991 meeting.

Dr. Schneider introduced new Council members as follows:

**Montgomery County** *Donald S. Stepita MD*

*Barton J. Gershen MD*

**Somerset County** *James A. Sterling MD*

The Council approved the requests from component societies for emeritus membership for the following physicians:

**Baltimore City** *Joseph Manuel Sanchez MD*

**Baltimore County** *Andrew C. Montague MD*

**Cecil County** *Klaus H. Huebner MD*

**Frederick County** *Harry W. Gray MD*

*George A. Thompson MD*

**Montgomery County** *Hugo Arias MD*

*Ira W. Pearlman MD*

**Talbot County** *George R. Callender MD*

*John T. Craighead MD*

*Robert R. Hahn MD*

**Affiliates** *Francis I. Catlin MD*

*Bahaeddin Safavi MD*

The Council approved the requests from the component societies for waiver of dues for the following physicians:

**Baltimore City** *James F. Carow MD*

*Joel M. Cherry MD*

*Patricia A. McIntyre MD*

**Baltimore County** *Robert L. Gattuso MD*

*Charles S. Kertay MD*

*Michael E. Sherlock MD*

**Montgomery County** *John H. Bouma MD*

*Ronald R. Cameron MD*

*Ira W. Pearlman MD*

#### Report of the Liaison Committee with the Medical Assistance Program

Dr. Gary Rosenberg, Chairperson, briefed the Council on the Maryland Access to Care Program. He indicated that an Issues and Program packet had been prepared providing a copy of the final regulations and detailing the tasks necessary to implement the program. At present, implementation of the mandatory program is scheduled for 1992 and, so far, there has been very good voluntary compliance. The fee increase

for primary care providers is scheduled to take place in December, with an approximate 50 percent increase in fees.

Dr. Gary Rosenberg also updated the Council on the Provider Fee Project. At this time, there are still differences between the State and the federal government. However, correspondence received from Representative Henry Waxman to Gail Wilensky (HCFA) stated that it was the intent of Congress to allow states to bring in funds from other sources to help fund the Medicaid program and to have those funds qualify for matching funds from the federal government. Med Chi is currently working with the State to have the voucher form clarified, as well as to reach an understanding on the IRS implications of the 1099 form.

Mr. Nelson Sabatini, Secretary, Department of Health and Mental Hygiene (DHMH), will be present at the House of Delegates meeting on September 14, 1991 to speak to the House and answer physicians' questions.

#### Report of the Ad Hoc Committee on the Scope of Podiatry Practice

After the veto of the podiatry practice bill (SB 428), the Governor mandated a committee, consisting of members of the Faculty, the podiatry community, and DHMH, to meet and discuss what was needed and come together with some kind of program.

Dr. Jeffrey Witte briefed the Council on behalf of the Ad Hoc Committee on the Scope of Podiatry Practice. He reported that the Committee would probably come up with a bill to be introduced by the Governor's office. The next meeting of the Committee is scheduled for September 26, 1991. The Committee will report to Council again in November 1991.

Dr. Schneider stated that any physician who may have questions and/or comments regarding this issue may contact any member of the Committee. The Committee members from Med Chi are John C. Gordon MD, Moosa Kazim MD, Mary Meyerson MD, Richard D. Richardson MD, Jeffrey F. Witte MD, and Gerry Evans, Esq.

#### Report of the Committee on Hospital Medical Staffs

In the absence of Chairperson Victor Hrehorovich MD, Paul Stagg MD presented the Committee's report to Council.

It was moved and approved to adopt the following policy related to substance abuse in the workplace:

The Medical and Chirurgical Faculty of Maryland supports the concept that the responsibility for adopting

a hospital's policy statement regarding the drug testing of physicians resides with each hospital's medical staff.

The Medical and Chirurgical Faculty of Maryland also supports the AMA policy relating to the drug testing of physicians by providing the following guidance which coincides with the AMA Policy:

1. Med Chi recognizes the appropriate use of urine drug and alcohol screening in monitoring recovering physicians as part of a comprehensive treatment plan for chemical dependence.
2. Med Chi cautions that drug and alcohol testing of employees should be limited to:
  - a. Pre-employment examinations of those persons whose jobs affect the health and safety of others;
  - b. Situations in which there is reasonable suspicion that an employee's job performance is impaired by drug and/or alcohol use; and
  - c. Monitoring as part of a comprehensive program of treatment and rehabilitation of alcohol and drug abuse or dependence.
3. Med Chi urges hospitals and other health care institutions that utilize drug testing programs to use confirmed positive test results to motivate physicians to seek assistance in resolving their alcohol or drug problems, preferably through the Faculty's Committee on Physician Rehabilitation.
4. Med Chi reaffirms its commitment:
  - a. To educate physicians and the public about the scientific issues of drug testing;
  - b. To monitor the evolving legal issues surrounding drug testing, especially the issues of positive drug tests as a measure of health status and potential employment discrimination resulting therefrom; and
  - c. To charge the Committee on Hospital Medical Staffs to oversee existing hospital drug testing sites.

#### **Report of the Committee on Public Health**

Herman Maganzini MD, Chairperson, briefed the Council on mammography standards and x-ray assistant qualifications. He reminded Council members of the panel discussions on mammography standards and x-ray assistants that will take place on September 14, 1991 at 8:30 am. He encouraged everyone to attend along with the invited legislators who will take part in these discussions.

Med Chi will be required to report back to the Legislature in December on these issues.

#### **Report of the Committee on AIDS**

Med Chi is obligated under SB 203 to develop a practice protocol for physicians who are HIV-positive.

Dr. Gill briefed the Council on the Committee's revised protocol and asked physicians to attend the panel discussion the next morning and provide input. The protocol will be

presented to the Legislature in December 1991. This protocol was developed by Med Chi, with input from The Maryland Hospital Association (MHA) and the AIDS Commission of the Department of Health Education and Welfare (DHEW). The Board of Physician Quality Assurance (BPQA) has offered its recommendations.

#### **Report of the Committee on Managed Care and Third Party Liaison**

Donald Dembo MD, Chairperson, briefed the Council on how the Committee has expanded its agenda and become a panel for economic review.

The Committee suggested that a physician's contracting manual, similar to the one published by the California Medical Association (*Physician's Contracting Manual*), be developed to provide guidelines to doctors in their negotiations with third party carriers. Council approved the Committee's recommendation and referred the matter to legal counsel to negotiate with the California Medical Association and to determine the feasibility of creating a similar manual addressing Maryland law.

In response to the problem of independent utilization review by third party carriers and managed care organizations, the Committee recommended the creation of a mechanism to provide for binding arbitration in utilization disputes. The Committee anticipates that such a concept would be heavily utilized. The Council approved the recommendation and referred it to legal counsel. Legal counsel will report back to Council at its next meeting.

Dr. Dembo also briefed the Council on the Committee's meeting with representatives of Barton-Gillet in reference to the release of physicians' special identification numbers. After further discussions, it was moved and approved that Council would take this entire issue under advisement and have the Executive Committee review and report back to Council. A comment was made that the Scientific Activity Committee should develop a session on managed care and related contractual problems to be presented at the 1992 Annual Meeting.

#### **Report of the Ad Hoc Committee on Women in Medicine**

Due to the ever present need to recruit women physicians to participate in organized medicine and because of the special gender issues in medicine that should be addressed regularly, the Committee recommended that the Ad Hoc Committee on Women in Medicine become a permanent Med Chi Committee.

Council approved the Committee's recommendation and referred it to the Bylaws Committee for evaluation. The permanent Committee will include both female and male members.

#### **Report of the Finance Committee**

Dr. Blumberg reported on two recommendations that the



Finance Committee had presented to the Executive Committee for its approval.

Council approved the referral to the House of Delegates of the Executive Committee's recommendation to change the name of the Physician Rehabilitation Fund to Membership Services Reserve. (This fund does not include any monies from the DHMH for physician rehabilitation).

Council also approved the referral to the House of Delegates of the Executive Committee's recommendation to redesignate the \$10 physician rehabilitation line item on the dues billing to Membership Services Reserve — the purpose is to maintain funds for operational requirements.

#### **AMA Maryland Delegation - Update**

Dr. George Malouf, Sr., AMA Chairperson, expressed his appreciation to Med Chi's physicians for answering AMA's call to write to senators and congresspersons expressing their strong and assertive support of the AMA's position on the Resource-based Relative Value Scale (RBRVS).

Dr. Malouf praised all Faculty members and requested them to continue to answer AMA's calls and to become members of AMA and the Maryland PAC.

Due to the resignation of Clinton Leinweber MD as AMA Alternate Delegate for the Resident's Section, the name of Eric L. Champaine MD was submitted by the AMA Delegation to fill the unexpired term through December 31, 1992.

The Council approved the appointment.

#### **Living Will and Power of Attorney**

Dr. Breschi requested that the Committee on Professional Ethics' recommendation on the publication of a pamphlet entitled, *Living Will and Power of Attorney*, be reconsidered at this time. He also reviewed the idea of having other sources help fund this project. (The intent of the publication is to help educate doctors, which every institute will have to address come December.)

After extensive discussion, the Council approved having one copy of this pamphlet provided to each physician member, but the cost will be limited to no more than \$10,000. Means of alternative fundings are to be explored. A cover letter and response card will be included with this pamphlet, asking physicians for their comments.

#### **Adjournment**

There being no further business, the meeting was adjourned at 4:25 pm.

CAROL W. GARVEY MD  
Secretary



**Join us in a new kind  
of partnership ...  
uniting doctors,  
lawyers, teachers,  
parents, and youth  
against drug and  
alcohol abuse.**

Become part of the Maryland Doctor/  
Lawyer/Teacher Partnership Against Drugs.

As a doctor, you can use your first-hand knowledge and experience to make a difference in winning the war against drugs. Become part of a unique initiative in Maryland to bring doctor/ lawyer education teams into schools to talk about the medical and legal consequences of drug and alcohol abuse.

**To volunteer or for more details,  
call Med Chi's Public Relations  
Department at 301-539-0872,  
1-800-492-1056.**

**Doctor/Lawyer/Teacher Partnership  
Against Drugs**

**Medical and Chirurgical Faculty of Maryland  
House of Delegates (335th Meeting)  
Saturday, September 14, 1991  
Carousel Hotel, Ocean City, Maryland**

(At press time, the minutes were unapproved.)

**T**he 335th meeting of the House of Delegates of the Medical and Chirurgical Faculty was held on Saturday, September 14, 1991 in the Carousel Hotel and Resort Center in Ocean City, MD. Officers present were J. David Nagel MD, President; Jose M. Yosunico MD, President-elect; Carol W. Garvey MD, Secretary; Albert L. Blumberg MD, Treasurer; Marvin Schneider MD, First Vice President and Chairperson of Council; Alex Azar MD, Third Vice President; and Reynaldo L. Lee-Llacer MD, Immediate Past President.

The following Delegates (or alternates) were registered as being in attendance. (An asterisk next to a name denotes an alternate delegate; a double asterisk denotes a Delegate who is a member by virtue of being a Council member, and three asterisks denotes a Delegate who is both a Delegate and a Councilor for his or her component society; elective officers of the Faculty, AMA Delegates, and past presidents are Delegates by virtue of being Councilors.)

**Allegany County**

*Robert Feddis MD*  
*Leslie R. Miles, Jr. MD\*\**

**Anne Arundel County**

*Leoncio A. Ceccarelli MD*  
*Thomas C. Cullis MD*

**Baltimore City**

*Raymond M. Atkins MD\*\**  
*Paul Burgan MD*  
*Donald C. Chambers MD*  
*Augusto R. DeLeon MD*  
*Willarda V. Edwards MD*  
*Albert Folgueras MD\**  
*Rafael C. Haciski MD*  
*Joseph H. Hooper MD\*\**  
*Murray A. Kalish MD\*\**  
*John B. MacGibbon MD\**  
*Donald W. Mintzer MD*  
*Hiroshi Nakazawa MD\*\**  
*Samuel I. O'Mansky MD*  
*Stephen K. Padussis MD*  
*Gary L. Rosenberg MD\*\**  
*William B. Russell MD\**  
*Roland T. Smoot MD\*\**  
*J. Andrew Sumner MD*  
*Karl H. Weaver MD*  
*Jack M. Zimmerman MD*  
*(Bernadette Lane)*

**Baltimore County**

*Albert L. Blumberg MD\*\**  
*Herman Brecher MD*  
*Louis C. Breschi MD\*\**  
*John W. Buckley MD*  
*Donald H. Dembo MD\*\**  
*Christopher Harvey MD\*\**  
*Deusdedit Jolbitado MD*  
*John M. Krager MD*  
*Jose Martinez MD\**

*N. Edward Nachlas, Sr. MD*  
*J. David Nagel MD\*\**  
*Margaret L. Sherrard MD*  
*Jose M. Yosunico MD\*\**  
*(Neilson Andrews)*

**Calvert County**

*Joseph Fastow MD\*\**

**Cecil County**

*Henry J. Farkas MD*

**Charles County**

*Guillermo Sanchez MD*

**Dorchester County**

*Lewis M. Burdette MD*  
*Paul A. Staggs MD\*\*\**

**Frederick County**

*J. Fred Baker MD*  
*Arthur G. Manalo MD*

**Garrett County**

*Herbert H. Leighton MD\*\**

**Harford County**

*Rose Mary H. Bonsack MD*  
*Ben Oteyza MD*

**Howard County**

*Joyce Boyd MD*  
*Melvin S. Rapelyea MD*  
*Charles E. Taylor MD*

**Kent County**

*Harry P. Ross MD*

**Montgomery County**

*Carol L. Bender MD*  
*Michael Dobridge MD\*\**  
*Carol W. Garvey MD\*\**  
*Barton Gershen MD*  
*Fred A. Gill MD\*\**  
*Nelson Goodman MD\*\**  
*Earlene Jordan MD*  
*Charles H. Ligon MD*  
*Ralph E. Longway MD*

*Herman C. Maganzini MD\*\**  
*Francis C. Mayle, Jr. MD*  
*Edward S. Mehlman MD*  
*Bruce Rubin MD*  
*Marvin Schneider MD\*\**  
*Philip Schneider MD*  
*Mark S. Seigel MD*  
*Vincent Vaghi MD*  
*Isaac Weiszer MD*  
*Jeffrey F. Witte MD\*\**  
*(Ed Shanbacher)*

**Prince George's County**

*John E. Jeffrey MD*  
*Reynaldo L. Lee-Llacer MD\**  
*Zorayda M. Lee-Llacer MD*  
*George S. Malouf, Sr. MD\*\**  
*George S. Malouf, Jr. MD*  
*Kempanna Sudhakar MD\**  
*David N. Robb MD*  
*Robert Ruderman MD*  
*(Diane Briggs)*

**Talbot County**

*Donald T. Lewers MD\*\**

**Wicomico County**

*Alex Azar MD\*\**  
*James A. Cockey MD*  
*Hilda I. Houlihan MD*

**Worcester County**

*Frederico G. Arthes MD\*\*\**

**Specialty Societies**

*Maurice Furlong MD*

Also present were Executive Directors for several of the component societies (their names are listed under the appropriate county in parentheses), the Faculty's Executive Director, Angelo J. Troisi FACHE, and other members of the Faculty's staff.



### Call to Order

The meeting was called to order at 1:15 pm on Friday, September 14, 1991 by the President, J. David Nagel MD.

### Invocation and Pledge of Allegiance

Leslie R. Miles, Jr. MD, Chairperson of the Committee on Medicine and Religion, delivered the invocation. This was followed by the Pledge of Allegiance.

### Announcement

J. David Nagel MD called everyone's attention to the Rules of the House which were attached to the agenda. He requested compliance to these rules so that the meeting could proceed in an orderly fashion.

### Minutes

The Minutes of the House of Delegates' meetings held Wednesday, May 8, 1991 and Friday, May 10, 1991 were approved as written.

### Robert McAfee, M.D., Vice Chairperson of the AMA Board of Trustees

Robert McAfee MD, Vice Chairman of the AMA Board of Trustees, spoke on medical practice parameters and challenges to medicine in the 1990s. He summarized where we are with practice parameters and used the program developed in Maine as an example of how the system works. A new agency, Healthcare Policy Research, that will be making decisions about the appropriateness of therapy, was placed under the Public Health Service of the Department of Health and Human Services not the Health Care Financing Administration.

The AMA uses the term "parameter" to define therapy guidelines because "...there may be a dozen options for treatment depending on a patient's age, condition, etc., and each of these may be very appropriate." Dr. McAfee stated that practice parameters should be based on current information and be widely disseminated.

He mentioned that cardiology has had practice parameters in place since 1986 regarding the appropriateness of pacemaker insertion, and that anesthesiologists have adopted monitoring standards that have been accepted across the country. These examples of practice parameters have resulted in good quality care.

Dr. McAfee then discussed "Health Access America," the problems with health care in America, and the Medicaid system. He concluded that we need a new system that reaches those most in need.

Following Dr. McAfee's presentation, Dr. J. David Nagel presented him with a Certificate of Appreciation.

### Distinguished Guests

Delegate Leon Albin, District 11, Baltimore, who had been invited by Steven Padussis MD, was introduced by the President. He gave a short presentation during which he stated that

it was a privilege to meet with such a prestigious group and that he has always respected Med Chi for its input to Annapolis.

The President mentioned that we were also very fortunate to have had Delegates Fulton, Bonsack, and Gunns and Senator O'Reilly present at panel meetings today.

### Physician Rehabilitation Program

Nelson Sabatini, Secretary for the Department of Health and Mental Hygiene (DHMH), presented to J. David Nagel MD a check for \$304,000. This check is for the Physician Rehabilitation Program and the monies are derived from physician renewal fees to the State. The amount is based on an estimate of monies to be collected.

### Media Awards

The President announced the winners of the Sixth Annual Media Awards Program for excellence in medical journalism.

The winners were Sue Miller in the daily newspaper category for her article, "AIDS, 10 Years Later," which appeared in *The Evening Sun*; Hollis Paschen in the non-daily newspaper category for his article, "The Wounded Healer: Art Lillicrapp's Ministry at Howard County General Hospital," which appeared in the *Columbia Flier*; and Merrie Street in the radio and television category for her program, "The Cancer Nobody Talks About," which was broadcast by WPOC. None of the winners were present.

The President also acknowledged all those who participated in this year's media awards presentation and thanked all media personnel.

### Maryland Medical Journal Award

From eighty-one articles published in the *Maryland Medical Journal (MMJ)* in 1990, the Editorial Board selected the article, "Venomous Snakebites," by Drs. Barry S. Gold and Robert A. Barish as the Best Article of the Year. It appeared in the September 1990 issue of the *MMJ*. Neither physician was present to accept the award.

### Emeritus Membership

On motion by Marvin Schneider MD, Chairperson of Council, at the request of the respective component societies, and by the direction of the Council, the following members were granted emeritus membership:

**Baltimore City**  
**Baltimore County**  
**Frederick County**

*Andrew C. Montague MD*  
*Klaus H. Huebner MD*  
*Harry W. Gray MD*  
*George A. Thompson MD*

**Montgomery County**

*Hugo Arias MD*

**Talbot County**

*Ira W. Pearlman MD*  
*George R. Callender MD*  
*John T. Craighead MD*

**Affiliates**

*Robert R. Hahn MD*  
*Francis I. Catlin MD*  
*Bahaeddin Safavi MD*

### Dues Waiver

On motion of Marvin Schneider MD, and at the request of Council and the respective component societies, the following members were granted dues waivers:

#### Baltimore City

*James F. Carow MD*

*Joel M. Cherry MD*

*Patricia A. McIntyre MD*

#### Baltimore County

*Robert L. Gattuso MD*

*Charles S. Kertay MD*

#### Montgomery County

*Michael E. Sherlock MD*

*John H. Bouma MD*

*Ronald R. Cameron MD*

*Ira W. Pearlman MD*

Dr. Schneider noted that Richard Johnson MD, whose name had been submitted by Allegany County for a dues waiver, has since died.

### Report of Council

Marvin Schneider MD summarized many of the issues addressed by the Executive Committee and Council since the Annual Meeting in May; more than fifty committee meeting minutes and reports have been acted upon since then. He mentioned that the full report was available in an issue packet.

Dr. Schneider stated that the Faculty had contacted Congress and HCFA, and has testified on the proposed medical and surgical regulations on the Resource-based Relative Value Scale (RBRVS); this is a tremendous problem and the Council/Executive Committee will continue to work on it.

Regarding the Medicaid's Provider Fee Program, which Dr. Rosenberg will discuss in more detail later, the 1099 form is still a problem. Dr. Schneider mentioned that the bookkeeping issue has been difficult to resolve and that Med Chi is continuing to work with DHMH to resolve the problems.

Dr. Schneider also stated that four peer review resolutions have been introduced since the Annual Meeting dealing with: the reaffirmation of the Faculty's role in peer review; opposition to an optional referral of standards of medical care cases to the Faculty; opposition to any modification of the Faculty's role in the Board of Physician Quality Assurance (BPQA) nomination progress; and opposition to public access to information about physicians under investigation or charges.

In response to a new request for funding for Healthcare Credentials Verification, Inc., a loan of \$75,000 was approved by Council for a period of five years at 10 percent annual interest.

The Council supported the Medical Staff of Harbor Hospital Center in its dispute with the hospital's administration.

A draft practice protocol for physicians with human immunodeficiency virus (HIV) was referred to the Reference Committee and will be discussed later at this meeting. The Council went on record as asking the BPQA not to ratify its Executive Committee policy proposal regarding a physician knowingly infected with HIV or hepatitis B virus (HBV) performing exposure prone or invasive procedures.

The Council continues to register its dissatisfaction with the increase in licensure fees and will continue to monitor the matter. The Executive Committee stated its strong support for Congressman McMillian's proposed legislation to restore Medicare payments for electrocardiogram (EKG) interpretations.

The Council will continue to monitor legislative actions on the podiatry bill issue and is prepared to take whatever steps may be necessary as circumstances develop.

### Report of the Public Health Committee's Ad Hoc Special Committee to Study Radiation Technology and Nuclear Medicine Regulations

Herman C. Maganzini MD, Chairperson of the Public Health Committee, stated that the Ad Hoc Special Committee to Study Radiation Technology and Nuclear Medicine Regulations has been meeting over the summer. It also had has a joint meeting, as required by HB 408, with the BPQA, the Maryland Hospital Association (MHA), and radiologic groups to draw up a position on two matters related to radiology: (1) regulations for mammography centers and (2) a new form of radiologic technician to be called x-ray assistant — this would be a less trained individual so that physicians who do radiology in their office would be able to continue to do it in a somewhat similar way, yet ensure safety of the populace and employees.

Dr. Maganzini mentioned that a forum on these matters was held this morning, at which time the facts were presented. The forum was well-received and there were "lots of questions."

Dr. Maganzini then presented the following two recommendations from the Committee for adoption by Med Chi as their official position on the above-mentioned issues:

The Ad Hoc Special Committee of the Public Health Committee of the Medical and Chirurgical Faculty of Maryland has reviewed the American College of Radiology's standards and the Health Care Financing Administration's standards for mammography screening. The Ad Hoc Special Committee recommends that these standards be adopted as the standards described in House Bill 408, "Mammography Testing, Certification of Medical Radiation Technologists and Nuclear Medical Technologists." The Ad Hoc Special Committee further recommends that no other standards be developed or implemented.

The Ad Hoc Special Committee of the Public Health Committee of the Medical and Chirurgical Faculty of Maryland recommends the adoption of the category, "x-ray assistant." This individual will not be a radiation technologist but rather a medical assistant, part of whose function would be the taking of x-rays in a medical office under the direct supervision of a physician. The Ad Hoc Special Committee recommends that these individuals receive only that training necessary to assure safety to both patients and staff while acting in this limited role under the direct supervision of the physician.

Dr. Maganzini went on to explain the reason for the recommendations and mentioned that none of the 117 mammography centers surveyed had any objections to the mammography screening recommendations.

After much discussion, it was decided to change the word "category" in the second recommendation to "classification."



Also, so there would be flexibility on the part of the Faculty to modify its position somewhat during the legislative process, the House of Delegates decided not to adopt these recommendations as their position, but to accept the report from the committee.

Issue packets on these two subjects were available.

### **Report of the Public Health Committee's Special Ad Hoc Committee to Study Laboratory Regulations**

Carol W. Garvey MD, Chairperson of the Special Ad Hoc Committee to Study Laboratory Regulations, updated the House of Delegates on this issue, stating that since the House's last meeting in May, four meetings have been held with the DHMH's Laboratory Advisory Committee on regulations dealing with office-based laboratories, and there appears that a cooperative relationship has developed. Nineteen of twenty-four sections have been reviewed. There will be more meetings. When the regulations are finalized, the committee hopes to have some educational materials and programs available to physicians.

### **Report of the AIDS Committee**

Dr. Nagel mentioned that the Reference Committee met on August 6 to hold a public hearing on the draft *Practice Protocol for Physicians with HBV/HIV*. He thanked Dr. Kalish, Vice Chairperson of this Committee, for presiding over the meeting. Because of information being received almost daily from the Centers for Disease Control (CDC) and other scientific sources, the Reference Committee did not have a final resolution to present to this body. However, Fred Gill MD, Chairperson of the AIDS Committee, would present that Committee's report.

Dr. Gill discussed the Committee's draft *Protocol for Physicians with HBV/HIB*. Proposed changes resulting from comments made at the panel meeting on AIDS earlier today were handed out at this time. It was moved, seconded, and passed to approve the five recommendations separately.

After much heated discussion as to whether to include hepatitis B in the *Protocol*, the House voted to exclude any mention of hepatitis B in the *Protocol* and in the five recommendations presented today.

It was mentioned that this issue has become politicized and that, unfortunately, we were dealing with hysteria and not scientific fact in trying to come up with a *Protocol*. Dr. Gill strongly advised the House that it would be unacceptable to the AIDS Committee to remove HBV from the draft *Protocol*.

It was made a point of information that the draft *Protocol* was referring to the E Antigen Positive Hepatitis B. Some reasons cited not to include HBV in the *Protocol* were that it did not speak to the mandate of the law; there was no assurance the two diseases will historically follow the same line and the two issues should not be mixed; there is a vaccine for HBV and not for AIDS; and it may give citizens another reason for hysteria.

One reason presented to include HBV in the draft *Protocol* was that exclusion might hurt the medical society because

Med Chi had not followed the CDC's guidelines. In addition, HBV transmission is far more of a problem and health risk than HIV, and by including HBV, Med Chi would merely be saying it is in compliance with CDC's pamphlet, *Prevention of HIV and HBV*.

The changes, as presented, are appended to these minutes. Change #1, deletion of HBV/hepatitis B virus was adopted. Change #2 was accepted with the deletion of HBV and the addition of "wish to" before "...continue to perform" and of "The panel is designed to fulfill the requirements of the Maryland General Assembly's legislation" at the end of the paragraph. Change #3 was approved with the deletion of HBV. Change #4, a deletion, was approved as written. Change #5 was approved with the deletion of HBV.

Timothy Baker MD moved to include a preamble paragraph immediately before the heading "Expert Review Panel" as follows:

Transmission of HIV from physician to patient has never been documented.

The CDC has calculated the risk of any possible future transmission as inconsequential in comparison to real risks of preventable deaths that the public accepts without question (e.g., smoking, failure to use seat belts, easy access to guns, etc.)

The transmission of HIV from patient to physician has been documented.

The public is concerned with the negligible risk of transmission of HIV from physician to patient.

THEREFORE: Med Chi moves to address this concern with the following measures:

The motion to include the above information was seconded and passed by the House.

A motion was made, seconded, and passed that the information under "Advocacy Contract" and "Physician Compliance" be extracted and referred to legal counsel and Faculty Council prior to its re-insertion into the *Protocol*.

The final version of *Practice Protocol for Physicians with the Human Immunodeficiency Virus (HIV)* as accepted by the House of Delegates on September 14, 1991 is included as an official part of the minutes for this meeting.

### **Maryland Foundation for Health Care**

The President noted that the Maryland Foundation for Health Care has requested that Med Chi refrain from nominating members to its Board of Directors at this time due to contemplated downsizing. The House will abide by the request.

### **Report of the Maryland Medical Political Action Committee (MMPAC)**

Chairperson John Lynn MD mentioned why it was important for every physician to belong to MMPAC and made a strong request for those who had not joined to do so. Funding is important to Med Chi's continuation in the political arena. There are many important issues before elected officials and patients need the physician's advocacy.

Albert Blumberg MD made a motion, which was seconded



and passed, that "Med Chi's House of Delegates strongly supports MMPAC membership by all Maryland physicians."

### Adoption of Auditor's Statement

Albert Blumberg MD, Treasurer, asked that the auditors statement for 1990 be adopted as published in the August 1991 *Maryland Medical Journal*. It was accepted. Dr. Blumberg mentioned that although Med Chi received much less from DHMH this year, it is still in sound financial condition.

### Finance Committee Recommendations

Dr. Blumberg presented two motions recommended by the Finance Committee, approved by the Executive Committee, and presented to Council for adoption as follows: (1) To change the name of the Physician Rehabilitation Fund to Membership Services Reserve for accounting purposes and (2) to redesignate the \$10 Physician Rehabilitation line item on the dues billing to Membership Services Reserve. Both motions were accepted.

During the discussion of these motions, a request for a program budget was made so that the membership could see various program cost allocations. Dr. Blumberg stated that he was open to suggestions as to how to present the budget as to what the membership wanted.

### Bylaws Committee Report

Karl Weaver MD, Acting Chairperson to the Bylaws Committee, presented this Committee's report. He noted that there were several interrelated items caused by the need to change the Bylaws, so that any reference to Councilors would be removed from the OFFICER Article and placed under the COUNCIL Article. The reason for this change was due to the Maryland State Ethics Commission which declared that there was a conflict of interest for Med Chi Officers to be considered for the BPQA. The suggested changes to the Bylaws would extract references to "Councilors" as "Officers," allowing their consideration as nominees to the BPQA.

The Bylaws Committee report was presented to the House of Delegates.

- **1. Proposed Bylaw Amendment to Article IV, Section 1**

*Rationale:* Deletes all references to Councilors, transferring this information to Article VII — COUNCIL.

*Amend Article IV, Section 1, as follows — [ ] indicate deletion; CAPS indicate change.*

Section 1. The Elective Officers shall be a President, a President-elect, a First, Second and Third Vice President, a Secretary, AND a Treasurer [and Councilors].

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **2. Proposed Bylaw Amendment to Article IV, Section 3**

*Rationale:* Transfers Section 3 in its entirety to Article VII — COUNCIL, to clarify the fact that Councilors are not

Officers of the organization and should not appear under the OFFICERS Article but rather under the COUNCIL Article.

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **3. Proposed Bylaw Amendment to Article IV, Section 4**

*Rationale:* Deletes all references to Councilors, transferring this information to Article VII — COUNCIL.

*Amend Article IV, Section 4, as follows — [ ] indicate deletion; CAPS indicate change.*

Section 4. The Nominating Committee shall nominate candidates for each elective office to be filled, except President [and Councilors which]. THESE nominations shall be mailed to every member of the House of Delegates at least ten days before its annual session. The Chairperson of the Nominating Committee shall, between January 1 and January 15 each year, request each component society to submit to it, not less than forty-five days before the annual session, suggested nominees for the positions to be nominated by the Committee together with such background data as will assist the Committee in selecting the most qualified persons. No member may be nominated without his consent. Vice Presidents, to hold that office, shall be members of component societies which are in different Nominating Committee groups. Additional nominations may be made from the floor at the first meeting of the session and voting shall be limited to the nominees

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **4. Proposed Bylaw Amendment to Article IV, Section 6**

*Rationale:* Deletes all references to Councilors, transferring this information to Article VII, and amends the current Bylaws which now require a delay of one year before certain elective officers assume the position to which elected. (Should this Bylaw amendment be adopted by the House of Delegates, it shall not take effect until the conclusion of the 1993 annual session. Also, the Nominating Committee for 1992 will not consider nominees for the three Vice Presidents, Secretary, and Treasurer — these positions being filled by action of the 1991 Nominating Committee.)

*Amend Article IV, Section 6, as follows — [ ] indicate deletion, CAPS indicate change.*

Section 6. Elective officers [except Councilors] shall hold office for a term of one year or until their successors are elected. [Councilors shall hold office for a term of three years, with the exception of the representative of the Committee on Specialty Societies who shall serve for a term of one year, or until their successors are elected, provided that they may not serve more than two consecutive terms.] Elective officers [, except Councilors,] shall assume their duties at the close of the annual session AT WHICH THEY ARE ELECTED. [one year after their election, except that the] THE President-elect shall ALSO assume [that office at the close of the annual session at which he is elected. Councilors in each newly elected annual class shall assume their duties at the close of the annual session immediately



preceding which they were elected.] THE DUTIES OF THE PRESIDENT IMMEDIATELY AT THE CONCLUSION OF THE ANNUAL SESSION.

The Bylaws Committee recommended adoption of this proposed amendment. A motion was made, seconded and passed to substitute "when president's term expires" for "...At the close of the annual session." The amendment with the approved change was adopted by the House of Delegates.

## • 5. Proposed Bylaw Amendment to Article IV, Section 9

*Rationale:* Deletes all references to Councilors from Article IV, transferring it to Article VII.

*Amend Article IV, Section 9, as follows — [ ] indicate deletion; CAPS indicate change.*

Section 9. Vacancy in the office of President shall be filled by the President-elect. Vacancy in any other office elected by the House of Delegates shall be filled by the Council until the next annual session of the House of Delegates. [In the event of a vacancy in the office of Councilor, the Secretary shall notify the appropriate component society which shall fill the vacancy within sixty days of notification. If the component society fails to fill the vacancy within the time provided, the Council may elect a member of that component society to fill the vacancy.]

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

## • 6. Proposed Bylaw Amendment to Article VI, Section 4

*Rationale:* Deletes the requirement for one-third (thirty-member) endorsement of individual member resolutions so as to stimulate the submission of resolutions to the House of Delegates.

*Amend Article VI, Section 4, as follows — [ ] indicate deletion; CAPS indicate change.*

Section 4. All resolutions involving questions of Faculty policy which will be presented to the House of Delegates for action, shall be filed with the Executive Director and sent to all delegates with the call for the session, provided that by a two-thirds vote the House of Delegates may agree to consider any policy resolution without prior notice. No such resolution shall be accepted by the Executive Director which is not sponsored by a member or component society of the Faculty, the Council, or committees of the Faculty [provided, however, that a resolution introduced by an individual member must have the endorsement of either one-third of the membership of his component society or thirty members of his component society, whichever is smaller].

The Bylaws Committee recommended adoption of this proposed amendment. A motion was made, seconded, and passed to amend the report by substituting "five members" for "member." ("No such resolution shall be accepted by the executive director which is not sponsored by **five members**...") The amendment with the approved change was adopted by the House of Delegates.

## • 7. Proposed Bylaw Amendment to Article VII, Section 1

*Rationale:* Clarifies that the representatives of component societies are their Councilors.

*Amend Article VII, Section 1, as follows — [ ] indicate deletion; CAPS indicate change.*

Section 1. The Council shall be composed of the elective officers of the Faculty, the immediate past president, the Delegates to the American Medical Association, the deans of medical schools within Maryland, COUNCILOR representatives of component medical societies, and a representative of the Committee on Specialty Societies who shall serve for a term of one year.

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

## • 8. Proposed Bylaw Amendment to Article VII, Section 9

*Rationale:* Completes the paragraph transferred from Article IV to Article VII.

*Amend Article VII, Section 9, as follows — [ ] indicate deletion; CAPS indicate change.*

SECTION 9. ONE-THIRD OF THE COUNCILORS SHALL BE [elected] SELECTED ANNUALLY BY THE COMPONENT SOCIETIES FROM AMONG THEIR ACTIVE AND FORTY-YEAR MEMBERS WHO HAVE HAD SOME PREVIOUS ACTIVE SERVICE AT THE COMPONENT OR FACULTY LEVEL. EACH COMPONENT SOCIETY SHALL BE REPRESENTED BY ONE COUNCILOR FOR THE FIRST 200 ACTIVE OR FORTY-YEAR MEMBERS OR LESS AND ONE ADDITIONAL COUNCILOR FOR EACH ADDITIONAL 200 ACTIVE OR FORTY YEAR MEMBERS OR FRACTION THEREOF AS DETERMINED ANNUALLY ON DECEMBER 31 PROVIDED, HOWEVER, THAT ANY COMPONENT SOCIETY COMPOSED EXCLUSIVELY OF STUDENT MEMBERS OR ACTIVE MEMBERS WHO ARE ON THE RESIDENT STAFF OF HOSPITALS OR HOLDING A FELLOWSHIP SHALL BE REPRESENTED BY ONE COUNCILOR. [component societies which are to elect Councilors shall do so by majority vote in a membership election.] THE RESULTS OF THAT [election] SELECTION PROCESS BY EACH COMPONENT SOCIETY SHALL BE REPORTED TO THE FACULTY AT LEAST THIRTY DAYS BEFORE THE FACULTY'S ANNUAL SESSION.

The Bylaws Committee recommended adoption of this proposed amendment. It was moved, seconded, and adopted to change the word "of" to "at" after "...previous active service..." The amendment with the approved change was adopted by the House of Delegates.

## • 9. Proposed Bylaw Amendment to Article VII, Section 10

*Rationale:* Deletes paragraph from Article IV and transfers it to Article VII.

*Amend Article VII, Section 10, as follows — [ ] indicate deletion; CAPS indicate change.*

SECTION 10. COUNCILORS SHALL HOLD OFFICE FOR A TERM OF THREE YEARS, WITH THE EXCEPTION OF THE REPRESENTATIVE OF THE COMMITTEE ON

SPECIALTY SOCIETIES WHO SHALL SERVE FOR A TERM OF ONE YEAR, OR UNTIL THEIR SUCCESSORS ARE [elected] SELECTED, PROVIDED THAT THEY MAY NOT SERVE MORE THAN TWO CONSECUTIVE TERMS. COUNCILORS IN EACH NEWLY SELECTED ANNUAL CLASS SHALL ASSUME THEIR DUTIES AT THE CLOSE OF THE ANNUAL SESSION IMMEDIATELY [preceding which they were selected] FOLLOWING THEIR SELECTION.

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **10. Proposed Bylaw Amendment to Article VII, Section 11**  
*Rationale:* Deletes from paragraph Article IV and transfers it to Article VII.

*Amend Article VII, Section 11, as follows — [ ] indicate deletion, CAPS indicate change.*

SECTION 11. VACANCY. IN THE EVENT OF A COUNCILOR VACANCY, THE SECRETARY SHALL NOTIFY THE APPROPRIATE COMPONENT SOCIETY WHICH SHALL FILL THE VACANCY WITHIN SIXTY DAYS OF NOTIFICATION. IF THE COMPONENT SOCIETY FAILS TO FILL THE VACANCY WITHIN THE TIME PROVIDED, THE COUNCIL MAY [elect] SELECT A MEMBER OF THAT COMPONENT SOCIETY TO FILL THE VACANCY.

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **11. Proposed Bylaw Amendment to Article IX, Section 2**  
*Rationale:* Deletes the term "at least" on lines 13 and 14 for clarification, so that the requirement will be an exact number.

*Amend Article IX, Section 2, as follows — [ ] indicate deletion, CAPS indicate change.*

Section 2. Replacement members of the Board of Physician Quality Assurance to be seated each year shall be presented at the first meeting of the annual session of the House of Delegates and [at least] twice the number of vacancies to be filled for that specific year shall be voted upon as the list of nominees to be submitted to the Governor for appointment to the Board. Vacancies on the Board caused by death, resignation, or removal from office, shall be filled in accordance with the current Bylaws.

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **12. Proposed Bylaw Amendment to Article XI, Section 8**  
*Rationale:* Increases Editorial Board membership from six to at least eight.

*Amend Article XI, Section 8, as follows — [ ] indicates deletion, CAPS indicate change.*

Section 8. There shall be an Editorial Board of the *Maryland Medical Journal* [composed] COMPRISED of the Editor[,] AND AT LEAST EIGHT BOARD MEMBERS. [appointed by the] The Council SHALL APPOINT THE EDITOR for a three-year term or until a successor is appointed.[; an] THE PRESIDENT SHALL APPOINT ONE OF THE BOARD

MEMBERS AS Associate Editor [designated by the President from the Board members] for a three-year term or until a successor is appointed. [; and six members, two of whom shall be appointed by the President each year for a three-year term.] EACH YEAR, THE PRESIDENT SHALL APPOINT OR RE-APPOINT BOARD MEMBERS FOR THREE-YEAR TERMS AS NECESSARY. THE PRESIDENT SHALL ALSO APPOINT MEMBERS TO COMPLETE UNEXPIRED TERMS. The Board shall review and accept papers for publication in the *Maryland Medical Journal* in accordance with the objectives as approved by Council. The Board shall periodically review its goals/purposes of publication for Council re-review and approval, and shall SO report to the Council [at appropriate intervals].

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **13. Proposed Bylaw Amendment to Article XI, Section 21**  
*Rationale:* Changes "elect" to "select" and deletes references to councilors.

*Amend Article XI, Section 21, as follows — [ ] indicate deletion, CAPS indicate change.*

Section 21. A Nominating Committee of nine members, of which the Immediate Past President shall be Chairman, shall be appointed by the President as follows: each component society shall [elect] SELECT one nominee for the committee and the President shall select from these nominees one member of the committee from those submitted by the component societies in each of the following groups: (a) Allegany, Carroll, Frederick, Garrett, and Washington Counties; (b) Caroline, Cecil, Dorchester, Harford, Kent, Queen Anne's, Somerset, Talbot, Wicomico and Worcester Counties; (c) Baltimore City; (d) Baltimore County; (e) Anne Arundel, Calvert, Charles, Howard and St. Mary's Counties; (f) Montgomery County; and (g) Prince George's County. He shall also select a member-at-large. It shall nominate candidates as provided in these Bylaws for elective officers [except Councilors], elected committees, the Board of Physician Quality Assurance, and delegates and alternates to the American Medical Association. No member except the Immediate Past President may serve more often than once in each five years.

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **14. Proposed Bylaw Amendment to Article XI, Section 28**  
*Rationale:* Includes a description of a function currently performed by the Ethics Committee — the approval of corporate names by professional medical associations.

*Amend Article XI, Section 28, as follows — [ ] indicate deletion, CAPS indicate change.*

Section 28. A Committee on Professional Ethics composed of at least nine members appointed by the President shall render, and publish if warranted, written opinions on the proper interpretation of the "Principles of Medical Ethics," either on its own initiative or upon the request of any person, organization, physician or patient as they relate to social



policy issues, interprofessional relations, hospital relations, confidentiality, advertising, communications relations with the media, fees and charges, record practice matters and professional rights and responsibilities. THE COMMITTEE SHALL CONSIDER ALL PROPOSALS FOR THE USE OF CORPORATE NAMES BY PROFESSIONAL MEDICAL ASSOCIATIONS AND SHALL APPROVE THOSE NAMES THAT CONFORM WITH THE REQUIREMENTS OF THE LAW, RULES, REGULATIONS AND ESTABLISHED ETHICAL STANDARDS OF THE MEDICAL PROFESSION. The Chairman shall be appointed by the President from among the members.

The Bylaws Committee recommended adoption of this proposed amendment. The amendment was adopted by the House of Delegates.

- **15. Proposed Bylaw Amendment to Article XI, Section 31**  
*Rationale:* Includes selection of membership by component societies from component public relations activities.  
*Amend Article XI, Section 31, as follows — [ ] indicate deletion, CAPS indicate change.*

Section 31. A Public Relations Committee of at least five members shall undertake to enhance the image of physicians; supply speakers to organizations requesting them on subjects relating to the practice of medicine; undertake such methods as it deems advisable to inform and instruct the public generally on subjects related to the practice of medicine; issue to the press and other media of public information releases relating to the meetings, actions and activities of the Faculty, with the advice and approval of the President or Executive Director, and serve in an advisory capacity to the Auxiliary. Its Chairman and members shall be appointed by the President WHO SHALL ALSO APPOINT A REPRESENTATIVE DESIGNATED BY ANY COMPONENT SOCIETY. The Maryland State Dental Association shall have the right to [elect] SELECT one associate member of the committee with voice but without vote.

The Bylaws Committee recommended adoption of this proposed amendment. A motion was made, seconded and adopted to change the word "any" to "each" ("...who shall also appoint a representative designated by each component society..."). The amendment with the approved change was adopted by the House of Delegates.

### Review of Resolutions

Carol W. Garvey MD, Secretary, presented the following resolutions to be reviewed in accordance with the House of Delegates resolution of April 21, 1983 that requires that a review of all policy decisions be conducted ten years after their adoption; this resolution was revised at the House of Delegates meeting of September 24, 1988, requiring the review of resolutions five years after adoption:

Suggested actions are to REAFFIRM, FILE, or DELETE.

**Resolution 4A/86(a): RESOLVED**, That the Medical and Chirurgical Faculty of the State of Maryland hereby recognizes the reoccurrence of the unavailability of professional liability for physicians in this State, and be it further,

**Action:** File, No Action

**4A/86(b): RESOLVED**, That the Medical and Chirurgical Faculty shall investigate the circumstances surrounding this action by the Medical Mutual Liability Insurance Society of Maryland and shall take whatever steps are possible and necessary in order to assure the availability of professional liability insurance to any physician who is duly licensed for the practice of medicine and surgery in the State of Maryland.

**Action:** File, No Action

**Resolution 1S/86(a): RESOLVED**, That the Medical and Chirurgical Faculty of the State of Maryland become a member of and participate in a membership organization to inquire into and respond to the proposal by the Department of Defense to restructure the CHAMPUS Program, and other issues of common interest, and

**Action:** Delete

**1S/86(b): RESOLVED**, That the Medical and Chirurgical Faculty begin an investigation into the feasibility of creating a statewide organization or network of physician IPAs capable of entering into contracts for the provision of health care on behalf of its physician members, and

**Action:** Delete

**1S/86(c): RESOLVED**, That the Council shall have the authority to authorize expenditure of funds and the creation of such an organization should the investigation indicate that such an organization should be formed.

**Action:** Delete

**Resolution 2S/86: RESOLVED**, That this House expresses its heartfelt appreciation to Ms. Elza Davis for a job well done and expresses its hope that her wise counsel will continue to be available to the physicians of Maryland for many years to come.

**Action:** File, No Action

### Report of the Liaison Committee to the Medical Assistance Program

Gary Rosenberg MD, Chairperson to the Liaison Committee to the Medical Assistance Program, briefly reviewed the Maryland Access to Care (MAC) Program and the Medicaid Provider Fee Project since everyone had already received information packets on these programs.

Dr. Rosenberg said that all counties, except Dorchester, had met the requirements of the MAC program, and that the program is going well.

Regarding the Medicaid Provider Fee Project, Dr. Rosenberg stated that there is a proposal from DHMH to allow physicians to charge and receive all of their usual fee, then pay back the "Provider Fee" or do as they do now and have the "provider fee project" amount withheld so they don't have to pay it back. DHMH felt that such a system of repayment would meet HCFA's requirements. The Faculty is continuing to work with DHMH to clarify the issue of the 1099.

Nelson Sabatini answered questions on the Provider Fee Project. He stated that it was DHMH's intent that "it was being used the way it was being used" and if physicians wished to change it, they must do so through legislation. Mr. Sabatini did not feel legislation would be introduced to change the way the program was working. He referred to Congressman Waxter's letter to Gail Wilensky of HCFA, in which Congressman Waxter stated that "if you do not like it, you may not agree with it, but that [what Maryland is doing] is what we intended to do." He reiterated that Maryland would prevail on this issue. He explained how Medicaid rolls were up and states have to find a way to pay the increase.

### Wicomico County Resolution

Dr. Azar stated that because of the continuing work being done by Med Chi to resolve the Provider Fee Project issue, the Wicomico County Medical Society has decided to withdraw its resolution regarding this matter.

## Practice Protocol for Physicians with the Human Immunodeficiency Virus (HIV)

### Adendum to the House of Delegates Minutes (Adopted September 14, 1991)

The Medical and Chirurgical Faculty of Maryland, in consultation with the Centers for Disease Control, the Maryland Hospital Association, and the Department of Health and Mental Hygiene, shall develop a practice protocol for physicians who are infected with HIV. (HB 124)

The Maryland Practice Protocol for Physicians with the Human Immunodeficiency Virus (HIV) complies with the Centers for Disease Control (CDC) "Recommendations for Preventing Transmission of Human Immunodeficiency Virus...to Patients During Exposure-Prone Invasive Procedures," as published in the *Morbidity and Mortality Weekly Report (MMWR)* on July 12, 1991. This includes adherence to universal precautions and infection control practices. This protocol is intended to be applied to physicians only, although it may be applicable to other health care groups.

The Medical and Chirurgical Faculty of Maryland (Med Chi) requests the Maryland General Assembly to consider the following facts when developing any legislation relating to physicians infected with HIV:

1. Transmission of HIV from physician to patient has never been documented.
2. The CDC has calculated the risk of any possible future transmission as inconsequential in comparison to real risks of preventable death that the public accepts without question (e.g., smoking, failure to use seat belts, easy access to guns, etc.).
3. The transmission of HIV from patients to physicians has been documented.

Despite these facts, the public is concerned with the negligible risk of transmission of HIV from physician to patient.

### Committee Reports

The President noted that several committee reports containing no recommendations or resolutions for action at this time appeared in the August 1991 *Maryland Medical Journal*. It was noted that any recommendations contained in those reports were acted upon at the 1991 annual session.

### Other Business

Dr. Mintzer asked who authorized the raised dues. It was noted by the President that the membership dues had not been raised and what Dr. Mintzer was referring to was the physician licensure renewal fee, which was raised by the BPQA.

Dr. Hooper made a motion that whenever an AMA Delegate position is vacated, it be filled whenever possible by an Alternate Delegate. After some discussion, this motion was not carried.

### Adjournment

There being no further business, the meeting was adjourned *sine die* at 5 pm.

To address this concern, Med Chi offers the following practice protocol for physicians with HIV:

### Expert Review Panel

Physicians infected with HIV who perform exposure-prone procedures must be evaluated to determine whether they should modify their professional activities to reduce the risk of transmission of HIV to patients. Physicians who test positive for HIV and wish to continue performing exposure-prone procedures shall seek counsel from an expert review panel or refrain from performing those procedures. The panel is designed to fulfill the requirements of the Maryland General Assembly's legislation.

Every physician case will be referred to a review panel appointed by Med Chi which consists of two components: a core group and two additional members. The core group is comprised of:

- a physician specialist in infectious disease, knowledgeable in HIV issues, appointed by Med Chi, who shall be chairperson of the review panel;
- a physician representing the state health department, appointed by the Secretary to the Department of Health and Mental Hygiene (DHMH); and
- a physician representative from the Maryland Hospital Association (MHA).

These representatives will be assigned to the panel by Med Chi for a designated period of three years to provide continuity in the panel's decisions and may be reappointed. The two other panel members selected by the core group will be unique to each case and will consist of:

- the infected physician's personal physician or other physician designated by the infected physician; and



- a physician with expertise in the same specialty as the infected physician.

The panel shall evaluate the potential risk of transmission of HIV from the infected physician to patients and, where appropriate, limit the infected physician from performing certain exposure-prone procedures or require the infected physician to obtain informed consent from patients prior to performing certain exposure-prone procedures.

The panel is to be staffed by Med Chi and its records are to be kept at Med Chi. The records of the panel are confidential, not-discoverable, and cannot be used in any civil action. Information regarding a case can be revealed to the Board of Physician Quality Assurance (BPQA) if the physician does not abide by the stipulations of the advocacy contract.

### Advocacy Contract

This section was extracted to refer to legal counsel and the Faculty Council:

Upon completion of the evaluation, the infected physician will sign an advocacy contract stipulating what is expected of him or her. Contracts will be tailored to the individual needs of the physician and will include a provision for quarterly monitoring of the infected physician by members of the expert review panel. During the quarterly monitoring, the panel will review, revise and/or update the infected physician's advocacy contract based on new information.

### Monitoring

Inside hospitals, each infected physician with procedure limitations imposed by the panel will be monitored confidentially by the review panel through a Health Services Cost Review Commission (HSCRC) database that creates an abstract for each hospital admission. In this database, physicians are assigned a unique identification number which can only be linked to the identity of the physician by Med Chi. This monitoring system will assure that the confidentiality of the infected physician is maintained.

Infected physicians who perform invasive procedures outside hospitals (e.g., surgicenters) will be subject to quarterly reviews of their patients' medical records by a member of the review panel.

### Physician Compliance

This section was extracted to refer to legal counsel and the Faculty Council:

HIV-infected physicians who knowingly perform exposure-prone procedures and do not voluntarily restrict themselves or seek advice from the panel will be subject to action by the BPQA. HIV-infected physicians who violate the terms of their advocacy contract will also be subject to action by the BPQA. The review panel shall be required to report violations of advocacy contracts to the BPQA.

Provisions for professional and/or financial/insurance assistance must be made to help physicians who modify their practice patterns as a result of their HIV status.

### Liability

An effective review of the infected physician can only take place if the members of the expert review panel can feel free to express their opinions without fear of litigation. Immunizing panel members from suit must be an integral part of any legislation concerning this protocol.

### Confidentiality

It is mandatory that great care be provided to ensure the confidentiality of any physician who voluntarily seeks the advice of the panel. Knowledge of the physician's HIV status shall be restricted to the members of the expert panel unless the physician does not abide by the advocacy contract, in which case the physician will be reported to the BPQA.

### Testing

Physicians who perform exposure-prone procedures have a professional responsibility to know their own HIV status. Physicians who perform exposure-prone procedures or who have reasonable cause to believe they may be infected should determine their serostatus and, if positive, voluntarily refrain from performing exposure-prone procedures or seek the advice of the expert review panel. Mandatory testing of physicians or health care workers is not recommended.

### Definitions

**HIV-positive Physician** - A physician who has a positive ELISA (enzyme-linked immunoabsorbent assay) test with a confirmatory Western Blot.

**Exposure-prone Invasive Procedures** - The present CDC draft guidelines attempt to provide a clear distinction between invasive procedures from which there is little or no risk of transmission of HIV and those exposure-prone invasive procedures which may pose a significant risk of transmission of HIV. Exposure-prone invasive procedures are defined as those that present a recognized risk where the physician's blood is likely to contact the patient's body cavities, subcutaneous tissues, and/or mucous membranes. Contact can occur directly, as a result of overt bleeding by the physician following a percutaneous injury from a needle or other sharp instrument, or through injuries caused by bone, bone fragments, or implanted and fixed surgical devices. Contact can also occur indirectly, through contamination of instruments or materials used during the procedure.

Exposure-prone procedures include those that involve the digital palpation of a needle tip in a body cavity. Other potentially high-risk procedures are those that require the simultaneous presence of the physician's fingers and a sharp instrument or needle in a poorly visualized or highly confined anatomic site.

The Med Chi Committee on AIDS is currently surveying its specialty societies and will attach to this protocol a listing of procedures it considers to be high-risk for transmission of HIV. ■

what's

NEW?

Get the information you need on key issues:

AIDS

Animal Rights

Medicare N.P.R.M.

Mammography Standards

Council & Exec. Comm. Highlights

Medicaid Provider Fee Project

X-ray Assistants

BPQA Legislative Agenda

Physician Rehabilitation

Doctor/Lawyer/Teacher Partnership Against Drugs

For an "Issues and Programs" packet on any of these topics, please call 539-0872 from Baltimore or 1-800-492-1056 toll-free from other Maryland locations or return the form below to Med Chi at 1211 Cathedral St., Baltimore, MD 21201-5585.

Yes, please send me information on the following issues.

- ☐ AIDS
- ☐ Animal Rights
- ☐ Medicare N.P.R.M.
- ☐ Mammography Standards
- ☐ Council & Exec. Comm. Highlights
- ☐ Medicaid Provider Fee Project
- ☐ X-ray Assistants
- ☐ BPQA Legislative Agenda
- ☐ Physician Rehabilitation
- ☐ Doctor/Lawyer/Teacher Partnership Against Drugs

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

Zip \_\_\_\_\_ Phone \_\_\_\_\_



## The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium unless otherwise indicated. For information on Continuing Medical Education Activities, contact the Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205 (301-955-2959).

December 12-14	<b>4th Annual Wilmer Institute on Current Concepts in Ophthalmology plus Hands-on Excimer Laser and Phacoemulsification Wet Labs.</b> 20 Cat 1 AMA/PRA credits. Fee: \$300; \$250 those in training.
January 5	<b>Recent Advances in the Management of Age-related Macular Degeneration: Guidelines from Recent Clinical Trials.</b> 8 Cat 1 AMA/PRA credits. Fee: \$200 physicians; \$100 residents, fellows and allied health professionals.
January 24-26	<b>Frontiers in Research and Clinical Management of Asthma and Allergy,</b> at The Johns Hopkins Asthma and Allergy Center, Baltimore, MD. 15 Cat 1 AMA/PRA credits. Fee: \$350 physicians; \$225 residents, fellows and allied health professionals.
January 30-February 1	<b>Endoscopic Sinus Surgery: Laboratory and Lecture Series.</b> Cat 1 AMA/PRA credits available. Fee: \$1,250 hands-on laboratory course; \$295 lecture series only.
February-April	<b>33rd Annual Postgraduate Institute for Pathologists in Clinical Cytopathology</b> for Board Certified (or qualified) pathologists as a subspecialty residency. 140 Cat 1 AMA/PRA credits for two courses, both of which must be taken. Preregistration must be completed by March 15, 1992. <b>Home Study, Course A.</b> Personal reading and microscopic study in preparation for Course B. <b>In-residence, Course B. April 6-17, 1992</b> Concentrated lecture series with intensive laboratory studies.
February 3	<b>19th Annual Geriatric Symposium: A Board Review,</b> at the Stouffer Harborplace Hotel, Baltimore, MD. 36 Cat 1 AMA/PRA credits. Fee: \$495 early registration; \$570 late registration.
February 27-28	<b>Primary Health Care for Gynecologists and Obstetricians.</b> Cat 1 AMA/PRA credits available. Fee: \$300.
February 29	<b>Houston Everett Memorial Course in Urogynecology.</b> 9 Cat 1 AMA/PRA credits. Fee: \$150 physicians; \$100 residents.
March 11-13	<b>PET and SPECT Imaging of Living Brain Chemistry in Health and Disease.</b> 19 Cat 1 AMA/PRA credits. Fee: \$495 physicians; \$395 residents.
March 16-18	<b>Spectrum of Developmental Disabilities XIV: Spectrum of Learning Disabilities.</b> 20 Cat 1 AMA/PRA credits. Fee: \$395.
March 30 - April 1	<b>Integrating the Basic Sciences and Clinical Medicine: Breaking Down the Barriers,</b> at The Johns Hopkins University Downtown Center, Baltimore, MD. 15 Cat 1 AMA/PRA credits. Fee: \$125 before March 1; \$140 after March 1; \$105 each for groups of ten or more; \$50 students.
April 6-11	<b>19th Annual Pediatric Trends.</b> 44 Cat 1 AMA/PRA credits. Fee: \$585 physicians; \$425 residents and fellows.
April 14-16	<b>In Vitro Toxicology: Tenth Anniversary Symposium of the Center for Alternatives to Animal Testing.</b> 22 Cat 1 AMA/PRA credits. Fee: \$425 before March 14; \$525 after March 14.
April 23-24	<b>From Cell to Society: Public Health in the Next Millennium.</b> 13.5 Cat 1 AMA/PRA credits. Fee: \$225 before February 15; \$250 after February 15; \$190 Alumni of The Johns Hopkins School of Hygiene and Public Health.
Continuously Throughout the Year	<b>Visiting Preceptorship in Pediatric Critical Care Medicine.</b> Ongoing 5-day preceptorship by appointment. 40 Cat 1 AMA/PRA credits. Fee: \$600. <b>Ophthalmic Electrophysiology Technician Training Course.</b> Ongoing one-week course by appointment. The Wilmer Eye Institute, Baltimore, MD. <b>Ophthalmology Grand Rounds.</b> Audiovisual continuing education series of case discussions for clinicians; 3-8 topics per conference. Thursdays, 7:30-9:00 am. 2 Cat 1 AMA/PRA credits per session. Info: 301-955-5700. <b>Neuro-ophthalmology Conference.</b> Held twice per month. Info: 301-955-5700. <b>Cornea Conference.</b> Held monthly. Info: 301-955-5700.

**THE JOHNS  
HOPKINS MEDICAL  
INSTITUTIONS**

**Continuously  
throughout the Year  
(Continued)**

**The Department of Radiology and Radiological Sciences** offers several courses in abdominal and obstetrical ultrasound. Info: P. Williams 301-955-3169.

**Visiting Physicians.** Offered throughout the year for experience in the lab and participation in read-in sessions; by appointment only. 40 Cat 1 AMA/PRA credits. Fee: \$500.

**Johns Hopkins Medical Grand Rounds.** Accredited audiovisual continuing education series of case discussions for clinicians; thirty topics per year in five bimonthly programs. Individual and group subscriptions. 40 Cat 1 AMA/PRA credits. Info: 301-955-3988.

**Microsurgery Training at The Johns Hopkins Hospital.** One-week program offered continuously throughout the year. 40 Cat 1 AMA/PRA credits. Info: P. Williams 301-955-3169.



## PHYSICIAN'S RECOGNITION AWARD

During August and September 1991, the physicians listed below received the American Medical Association's (AMA's) Physician's Recognition Award. Established in 1968, the Award's purpose is to encourage physician participation in continuing medical education and to recognize those physicians who have voluntarily completed programs of continuing medical education.

Berger, Robert Steven  
Bever, Christopher T.  
Bright, Robert Wayland  
Camp, Turner  
Cook, Robert Craig  
Cowen, Joseph R.  
Dodson, Thomas William  
Dufresne, Craig Roger  
Earll, Jerry Miller  
Evans, Charles Hawes  
Fidei, Francis G.  
Fontanilla, Manuel G.  
Forgotson, Judith Hood  
Galvez, Edito Cabrera  
Geller, Steven Andrew  
Geraci, Stephen Anthony  
Glancy, John  
Goldman, Stanford Milton

Gordon, John Charles  
Grace, Rene Earle  
Hannallah, Isis S.  
Hernandez, Rafael  
Hung, Lien Ai  
Jani, Sushma Niranjani  
Jarboe, James Patrick  
Jeffrey, John Edward  
Kaplow, Sheppard  
Kinzer, Charles William  
Kolker, Richard Jay  
Lafsky, Benjamin P.  
Lazatin, Manuel Manalang  
Lilly, Michael Peter  
Manno, Marie Hren  
Marinelli, Glenn Gerard  
Martin, Janet Simpson  
Mathur, Murli Narain

Maximous, Talaat F.  
McMahon, Robert William  
Menetrez, Jean H.  
Murphy, James Peter  
Naclerio, Robert Michael  
Nathan, Swami  
Noar, Mark David  
Noone, Paul Taylor  
Novoa, Julio Cesar  
Peterson, Robert T.  
Raines, Bannister Lee  
Ramirez, Jorge Benito  
Rentschler, Lawrence L.  
Rieckelman, Alice P.  
Righini, Massimo A.  
Rosenbaum, Stephen David  
Rothman, Warren  
Rundell, James Ray

Sample, Donald William  
Sanford, Edward F.  
Schia voni, Edmund Stephen  
Segal, Elizabeth Orr  
Silver, Paul Andrew  
Styrt, Jerome  
Sunshine, Ian  
Taylor, Duane Jon  
Tomaszewski, Maria M.  
Verghese, Cherukoth J.  
Wallach, Edward Eliot  
Williams, Samuel R.  
Wolf, Marcia Debra  
Wright, Curtis  
Yow, Raymond Murray  
Zuba, Doina



## University of Maryland

For each course, additional information may be obtained by contacting the Program of Continuing Education, University of Maryland School of Medicine, Room 14-011, BRB, 655 W. Baltimore St., Baltimore, MD 21201 (301-328-3956) or by calling the phone number listed after a specific program. FAX 301-328-3103.

December 8-14	<b>12th Annual Baltimore-Washington Seminar and Tutorial: Gynecology.</b> Cat 1 AMA/PRA credits available. Fee: \$750-\$1,800. Info: Pat Rahmiow, 301-321-5481.
December 13	<b>Lung Cancer: Current Concepts and Therapies.</b> 6 Cat 1 AMA/PRA credits. Fee: \$25. Info: Carol McNamara, 301-328-2565.
December 14	<b>Diagnosis and Management of Rheumatic Diseases for the General and Family Practitioner.</b> 6.5 Cat 1 AMA/PRA credits. Fee: \$25.
January 24-25 & March 27-28	<b>Laparoscopic Surgery: The Team Approach.</b> 14 Cat 1 AMA/PRA credits. Fee: \$2,500. Info: Pat Rahmiow, 301-321-5481.
March 6-8	<b>R. Adams Cowley 14th National Trauma Symposium,</b> at the Hyatt Regency, Baltimore, MD. Info: Kimberly C.A. Unitas, 301-328-2399.
April 3	<b>Current Cancer Therapy Symposium.</b> Info: Sharon Stenhouse, 301-328-3956.
April 23-24	<b>2nd Annual Symposium on Infectious Disease in Everyday Medicine.</b> 12 Cat 1 AMA/PRA credits. Fee: \$175. Info: Eunice Katz, 301-328-3956/7560

### Continuously Throughout the Year

**Visiting Professor Program** - A new 1991-1992 directory of speakers and their topics is available to area hospitals and other health care organizations. NO administrative fees are charged for this service. Info: 301-328-3956.

**Departmental Rounds and Conferences** - Weekly, hands-on and lecture presentations hosted by the University's clinical departments. Hour-for-hour Cat 1 AMA/PRA credits available. Brochure available.

When you can buy any home, here's why you'll choose a Villager.



**1.** Villager offers the finest homesite locations—in Green Spring Valley communities as well as Worthington Park and the Falls Road corridor. We'll also build your home on your lot... with our plans or yours. Below market financing.



**3.** The opportunity to work one on one with our designers. We'll custom build from your designs or from ours. Our new 1991 designs include the Euro Classic I Award of Excellence recipient from the Homebuilders Association of Maryland and the next generation of our Euro Classic series. Call now. We're building just a few homes for 1991, from \$290,000 to over \$1 million. Phone Sandy Marenberg or Karen Pine for a personal consultation.

**2.** Breathtaking estate-size home designs, and the reputation for using the very finest materials and craftsmen.

Ruxton—Knollcrest Farms at Hillstead and Huntspring  
Pikesville—Helmsley Court, Anton North II—(Merry Hill)  
Owings Mills—Worthington Park and Foxchase  
Stevenson—Greenspring Subdivision



**VILLAGER**  
BUILDERS • DEVELOPERS • REAL ESTATE

Brokers Protected

McDonough Crossroads Office Park  
20 Crossroads Drive, Suite 113 • Owings Mills, MD 21117  
Phone: (day) 363-0963 (evening) 602-0820



## Are Your Offices In Need Of Major Surgery?

Chaotic traffic patterns, inadequate waiting areas, abrasive color schemes, a lack of integration of special equipment—all symptoms of a poorly designed medical suite. Symptoms that can increase the stress on your entire staff, cost you time, money and even your patients.

This is why many healthcare professionals seek the services of Levin/Brown. As one of the region's leading architects and interior designers of medical suites, surgery and ambulatory care facilities, laboratories, and medical office buildings, we can show you how to make your offices a far more productive place to practice medicine.



**Levin/Brown & Associates, Inc.**

Mark David Levin, AIA

Jay Ira Brown, AIA

Architects/Interior Designers

*Designers of the Total Medical Environment*

17 Warren Road • Suite 7B • Baltimore, Maryland 21208 • (301) 486-9006

## Miscellaneous Meetings

<b>December 6</b>	<b>Beyond the Movements: Hope for Men, Women and Relationships</b> , sponsored by the Foundation for Contemporary Mental Health at the Key Bridge Marriott Hotel, Arlington, VA. Fee: \$150; \$100 students. Info: Audrey Cannamela, 202-296-6611.
<b>December 7-8</b>	<b>Managing Diabetes in the 1990s and the Great Masqueraders - Psychiatric Disorders: Overviews for the Family Physician</b> , sponsored by the Maryland Academy of Family Physicians at the Sheraton Hotel, Wilmington, DE. 6.5 Cat 1 AMA/PRA credits. Fee: \$55 MAFP members; \$80 nonmembers; \$35 paramedicals; Free for residents, medical students, and MAFP retired and life members. Info: Joseph P. Connelly Jr., MD, 301-747-1980
<b>January 24-25</b>	<b>Performing Arts Medicine: Issues in Diagnosis and Management</b> , sponsored by Med Chi's Committee on Medicine and the Performing Arts, at the Faculty Building, Baltimore, MD. Fee: \$50 physicians; \$35 allied health professionals; \$15 musicians and students. Info: Susan Harman, 301-539-0872 or 1-800-492-1056.
<b>February 8</b>	<b>How to Market Your Medical Practice Without Advertising</b> , at Howard Community College, Columbia, MD. Fee: \$60. Info: Office of Continuing Education, 301-964-4944 or Sheryl Kurland, 301-750-6990.
<b>February 10-12</b>	<b>Aging: The Quality of Life</b> , sponsored by the Christopher Columbus Medical Sciences Committee of the National Institutes of Health at the Omni Sheraton Hotel, Washington, DC. 21.5 Cat 1 AMA/PRA credits. Fee: \$150 before December 15; \$200 after December 15; \$250 on site. Info: Suzanne Kuntz, 202-639-4524.
<b>February 21-22</b>	<b>American College of Sports Medicine Meeting, Mid-Atlantic Regional Chapter</b> , at Western Maryland College, Westminster, MD. Info: Dr. Samuel Case, 301-857-2570.
<b>March 7</b>	<b>Perspectives in Orthopedics and Sports Medicine</b> , sponsored by the Maryland Academy of Family Physicians at Wisp Resort, Deep Creek Lake, McHenry, MD. 5 Cat 1 AMA/PRA credits; 5 AAFP prescribed hours. Fee: \$55 MAFP members; \$80 nonmembers; \$35 paramedicals; Free for residents, medical students, and MAFP retired and life members. Info: John B. Umhau, Jr. MD, 301-747-1980.

## Shady Grove Adventist Hospital

9901 Medical Center Drive, Rockville, MD. Info: 301-279-6000.

<b>December 5</b>	<b>Gastrointestinal Surgery for Severe Obesity</b>
<b>December 12</b>	<b>Holiday Depression</b>
<b>December 19</b>	<b>Ocular Manifestations of Systemic Disease</b>

## Statement of Ownership, Management, and Circulation

*Maryland Medical Journal* is published by the Medical and Chirurgical Faculty of Maryland, 1211 Cathedral Street, Baltimore, MD 21201. Victor R. Hrehorovich MD, Editor; Henry P. Laughlin MD, ScD, ScSD, Associate Editor; Janet Campbell, Managing Editor. Editorial Offices: 1211 Cathedral Street, Baltimore, MD 21201-5585. Owner: Medical and Chirurgical Faculty of Maryland. No known bondholders, mortgagees, or other security holders.

Total number of copies printed issue nearest filing date: 7,900; monthly average preceding 12 months: 7,769. Paid circulation through dealers, carriers, street vendors, and counter sales: none. Mail subscriptions and total paid circulation: 7,304; average: 7,256. Free distribution: 123; average: 105. Total distribution: 7,427; average: 7,361. Office use, etc.: 473; average: 408

Total: 7,900; average: 7,769



# AIM HIGH



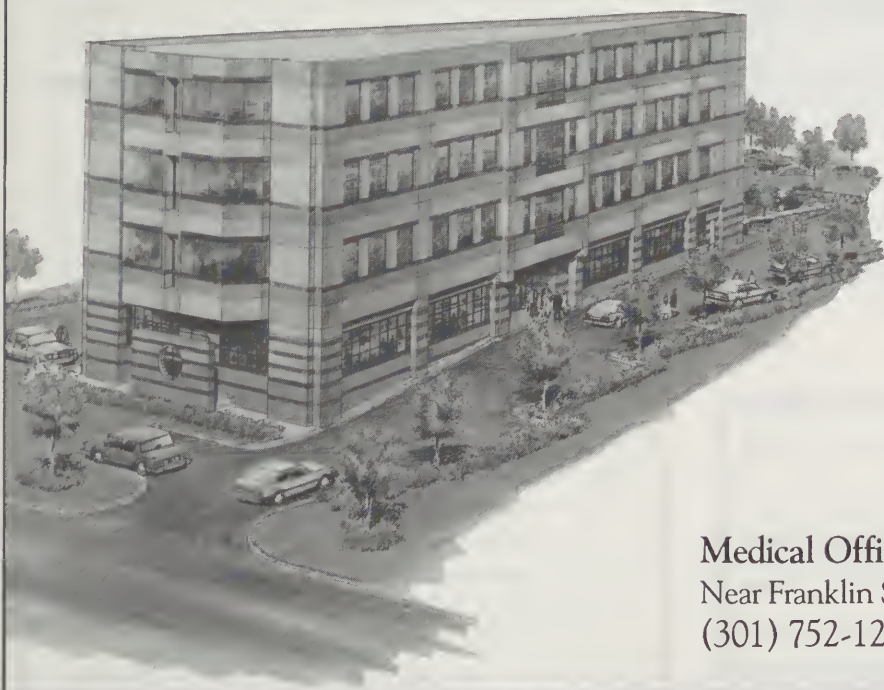
## CREATE A MEDICAL BREAKTHROUGH.

Become an Air Force physician and find the career breakthrough you've been looking for.

- No office overhead
- Dedicated, professional staff
- Quality lifestyle and benefits
- 30 days vacation with pay per year

Today's Air Force provides medical breakthroughs. Find out how to qualify as a physician or physician specialist. Call

USAF Health Professions  
Collect 301-981-7897



Build equity and  
abandon the high cost/  
no profit situation of  
leasing your practice.  
Fixed rate financing available.

*Custom Designed Suites  
Available Immediately*

Medical Office Condominiums  
Near Franklin Square Hospital Center  
(301) 752-1241

**Rossville  
Medical  
Center**



### **PEDIATRICIAN**

Baltimore area Pediatric Group needs third BC/BE Pediatrician. Suburban population. Closes ties to Johns Hopkins. Excellent first year salary, full benefits, early partnership. Send resumé to Michael Andorsky MD, 9199 Reisterstown Rd, Owings Mills, MD 21117.

### **PHYSICIANS WANTED**

Semi-retired or retired physicians for pleasant office practice part-time. Call 547-2686.

### **ORTHOPAEDIC SURGEON**

BC/BE to join 4 orthopaedists in a large multispecialty group. Interest and expertise in spine surgery a plus. Extensive support system and modern facility located in Columbia, near the cultural advantages and medical schools of the Baltimore-Washington, DC area. Please send CVs to: Patuxent Medical Group, Inc., 2 Knoll North Drive, Suite 401, Columbia, MD 21045, Attn: Physician Recruiter. EOE/MFHV.

### **INTERNIST**

BC/BE Internist wanted for established primary care practice. Competitive salary, incentives, full benefits, early partnership. Baltimore/Washington area. Send CV to R. Brimhall MD, 1833-A Forest Drive, Annapolis, MD 21401.

### **OPHTHALMOLOGIST**

Wanted for Ellicott City office. Equipment provided, flexible terms. Reply to Box 9.

### **MEDICAL PRACTICE**

Interested in established medical practice or part ownership. Excellent opportunity for Family Physician or Internist. Beautiful countryside and expanding community. Please contact W. Iglesia MD, 301-876-3737.

### **MEDICAL OFFICE**

Suitable for 1 or 2 physicians: St. Mary's County, a rapidly growing, semirural area. Contact Leon Berube for details: 997 Old Route Five, Mechanicsville, MD 20659 (301-884-3113).

### **OFFICE SPACE TO SHARE**

Howard Co. Doctor's Bldg at Route 40 West in Ellicott City, MD. Available for sublet or on an hourly basis. Call Dr. Abbas (301)-461-4455.

### **OFFICE SPACE TO SUBLEASE**

Exam room and consultation room in new medical office in Columbia. Located between Route 29 and I-95. Full or part-time. (301) 290-5437.

### **SUBLEASE SATELLITES**

Beautiful, fully equipped, new family practice office seeking subspecialist to sublease satellites, one-half day per week. Full front and back office, staff available - exploding Crofton area. For further info call (301) 721-6500.

### **MEDICAL OFFICE FOR SALE OR LEASE**

New office in O'Dea Medical Building next to St. Joseph Hospital. 1,010 sq. feet with physician's office and three examining rooms. Please call 435-8050.

## **Opportunities**

to start, assume or join existing Pediatrician, Family Practice or Internal Medicine practice on the Eastern Shore of Maryland. Local Physician owned IPA model, HMO assisting in recruitment efforts to increase availability of Primary Care Physicians. Beautiful area located between the Chesapeake Bay and the Atlantic Ocean; close to Washington D.C. and Baltimore.

Submit Resume to:

Penny Gibson, Director Health Services  
P.O. Box 2410 • Easton, Maryland 21601  
Or Call: 1-800-334-3427, Extension #133

### **PHYSICIANS:**

M.D.'s with general medical, surgical, or Family Practice background to work as urgent care physicians in busy hospital Emergency Department. Part-time/full-time positions available. Competitive salary; flexible hours.

For details, contact: Dan K. Morhaim, M.D.  
Franklin Square Hospital Center  
9000 Franklin Square Drive  
Baltimore, MD 21237  
(301) 682-7046

## **FULL TIME EMERGENCY PHYSICIAN**

Large, urban emergency department seeing 50,000 patients per year in teaching hospital. Excellent salary and benefits.

Please contact:

Dr. Anne Salmon Barone  
or Dr. Jerome Snyder  
St. Agnes Hospital  
900 S. Caton Avenue  
Baltimore, MD 21229  
(301) 368-2012 or  
(301) 368-2000



**MEDICAL OFFICE SPACE  
PART-TIME**  
Attractive, new, furnished office, adjacent to busy Owings Mills Town Center Mall. Excellent parking. Call 285-6566.

**MEDICAL OFFICE FOR SALE  
OR LEASE**  
Glen Burnie Medical Arts Centre. In elegant medical building near hospital. Respond Box 13.

**FOR RENT**  
Bowie office. 1st floor - bright corner unit. 1,058 sq ft. Furnished exam rooms. Under market at \$10 SF. Excellent exposure and parking. Call 301-854-0358.

**FOR SALE**  
Space Labs 90101 Holter Analysis computer. Stand alone dual-channel system performs complete holter analysis and report generation. \$5000. Call Gina (301) 870-2192.

**FOR SALE**  
Maico audiometer, reflotron, readacrit centrifuge. Call after 5 pm, 995-1421.

**FOR SALE**  
X-ray processor and table, almost new sigmoidoscope. Contact Dr. K. Jain at 301-997-6901.

**FOR SALE**  
Impedance Phlebograph Stim-Tech IPG-2000. Hardly used. Call (301) 857-9393. ■

**MMJ**  
**Classified Advertising**

*Med Chi Members:*  
\$5 per line per insertion

*Physician Nonmembers:*  
\$8 per line, minimum \$50 per ad

Please submit copy seven weeks prior to the first day of the month in which you wish the ad to run. Items must be related to the practice of medicine. Ads placed for the benefit of a hospital or an HMO will be billed at the nonmember rate. Spouses of deceased members shall be entitled to two complimentary insertions for the disposal of the deceased physician's practice or equipment. Ad cancellations must be received in writing seven weeks prior to the first of the month.

Send box replies or new ad copy to: *MMJ*, 1211 Cathedral St., Baltimore, MD 21201 or FAX 301-547-0915. Invoices are sent after the ad is published.

*Maryland Medical Journal*  
**Mission Statement**

The purpose of the *Maryland Medical Journal (MMJ)* is to educate and inform its readers of progress in clinical medicine and medical research and of development in other fields of interest to physicians; to promote the science and art of medicine toward the betterment of public health; and to provide a literate forum for open and responsible discussion of matters relevant to the field of medicine.

**MEDICAL OFFICES FOR RENT/TOWSON**

- ▲ Full Time or Part Time ▲
- ▲ New ▲
- ▲ Beautiful Setting ▲
- ▲ Next to St. Joseph Hospital ▲
- ▲ 1,020 Sq. Ft. Plus ▲
- ▲ Fully Carpeted ▲
- ▲ Free Parking ▲

**Call: (301) 337-6800**

**HARUNDALE  
OFFICE PARK**

- **Newly Renovated**
- **Low Rental Rates**
- **Equity Opportunity**

- One mile from North Arundel Hospital
- Next to Harundale Mall in Glen Burnie
- Outstanding parking ratio of 9 spaces per 1000 sq. ft.
- Custom designed offices
- Suites from 550 sq. ft. to 10,000 sq. ft.
- Elevator Service in both buildings

**Call (301) 995-5544**  
**Corridor Brokerage Services, Inc.**

Aarons D. see Alicea AE.

—see also Veltri EP.

# ACQUIRED IMMUNODEFICIENCY SYNDROME

Evans GE; Hall GD. The 1991 Maryland General Assembly: What can we expect? 27.

Sauri MA; Julie NL; Juarbe HM; Mayo FJ; Ligon CH; Fox RL; Koss G; Coggin JT; Burbach JW; Barton JH et al. Disseminated histoplasmosis in AIDS patients in Maryland. 573.

# ADENOCARCINOMA

Capito PR; Wang H; Brem H; Ahn HS; Bryan RN. Magnetic resonance imaging diagnosis of an intracranial metastasis of adenocarcinoma of the prostate: Case report. 113.

Elias EG; Parnes HL. Conservative treatment of adenocarcinoma of the lower rectum. 87.

# ADJUVANTS, IMMUNOLOGIC

Elias EG. Cancer immunotherapy. Part II: New approaches. 525.

Sherer PB. Adjuvant treatment of colorectal cancer: Response to the NIH consensus summary statement. 811.

# ADJUVANTS, PHARMACEUTIC

Elias EG. Adjuvant therapy in breast cancer patients with negative lymph nodes: An update. 20.

Sherer PB. Adjuvant treatment of colorectal cancer: Response to the NIH consensus summary statement. 811.

# ADRENAL CORTEX HORMONES

Hellmann DB. Medical therapy for SLE. 923.

# ADVANCE DIRECTIVES

Kopf R; Matricciani RM. The new Patient Self-determination Act: How this law will affect the Maryland physician. 395.

# ADVERTISING

Miller JM. Medical advertising [letter]. 137.

# AGED

Daly MP. Summary of the NIH consensus statement on the treatment of sleep disorders of older people. 1096.

Ahn HS. see Capito PR.

# ALCOHOLISM

DeFazio A; Flynn JPG; Kelly MP. Potential for missed diagnosis in rehabilitation patients with a high-risk lifestyle [letter]. 984.

Alegado EB; Mardelli JT. Peripartum cardiomyopathy: A case study. 281.

Alicea AE; Veltri EP; Aarons D. Proarrhythmia: Disparity of programmed electrical stimulation results and spontaneous occurrence: A case report. 521.

# ALPHA-FETOPROTEINS

Goldstein PJ; Sundaram SG; Manimekalai S. Drug interference on alpha-fetoprotein assays. 513.

Roop AP; Boughman JA; Blitzer MG. Study of the relationship between elevated maternal serum alpha-fetoprotein and adverse pregnancy outcome. 775.

# AMBULATORY CARE

Rudeman R; Matricciani RM. DEMPAQ: Development and evaluation of methods to promote ambulatory care quality. 643.

# AMERICAN MEDICAL ASSOCIATION

Wagner HN Jr. Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award [interview by Michelle Burke and Betsy Newman]. 557.

# AMIODARONE

Ballas SL; Veltri EP. The efficacy of amiodarone in the treatment of refractory nonsustained ventricular tachycardia. 475.

# AMPHOTERICIN

Sauri MA; Julie NL; Juarbe HM; Mayo FJ; Ligon CH; Fox RL; Koss G; Coggin JT; Burbach JW; Barton JH et al. Disseminated histoplasmosis in AIDS patients in Maryland. 573.

# ANGIOPLASTY, TRANSLUMINAL, PERCUTANEOUS CORONARY

Vogel RA. The spectrum of treatment for coronary artery disease: Medical regression to high-risk angioplasty. 219.

# ANTIBODIES, BACTERIAL

Feaga WP. Lyme disease [letter; comment]. 138.

# ANTIBODIES, VIRAL

McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.

# ANTIBIOTICS

deBorja C; Hrehorovich VR. Rocky Mountain spotted fever: Often a diagnostic dilemma. 367.

Feaga WP. Lyme disease [letter; comment]. 138.

# ANTICOAGULANTS

Rubin LJ. New concepts in the treatment of primary pulmonary hypertension. 209.

# ARRHYTHMIA

Alicea AE; Veltri EP; Aarons D. Proarrhythmia: Disparity of programmed electrical stimulation results and spontaneous occurrence: A case report. 521.

# AUTOANTIBODIES

Ziminski CM. Autoantibodies and SLE. 901.

Auxiliary. Column. see Medical and Chirurgical Faculty.

Auxiliary. Column.

# AWARDS AND PRIZES

Wagner HN Jr. Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award [interview by Michelle Burke and Betsy Newman]. 557.

Backerman IA. Premenstrual syndrome: Update 1991. 1003.

# BACTERIAL INFECTIONS

Edelman R; Levine MM. Enteric vaccines. 199.

# BACTERIAL VACCINES

Edelman R; Levine MM. Enteric vaccines. 199.

Ballas SL; Baughman KL; Griffith LS; Veltri EP. Mexiletine-associated left ventricular dysfunction: A case study. 519.

—Veltri EP. The efficacy of amiodarone in the treatment of refractory nonsustained ventricular tachycardia. 475.

Baltazar RF. Stress testing: optimal use of the various modalities of stress testing in the diagnosis of coronary artery disease. 501.

—Grant A; O'Mara V; Efron MB. The use of a low-level stage during exercise testing in predicting severe coronary disease. 1079.

Bartlett JG. Members in the news. 737.

Barton JH. see Sauri MA.

Baughman KL. see Ballas SL.

Beaver BL. see Johnston SJ.

Bell W. see Stern BJ.

Benner M; Rossler D. Rhabdomyolysis and acute renal failure: A review of two cases. 373.

Bezirdjian DR. Retrieval and unknotting of inadvertently placed intravascular catheters. 381.

# BIOGRAPHY

Harman SE. Marcia C. Noyes: Making a life. 311.



Kimble ST. Amos A. Evans MD: Father of American naval medicine. 587.

Miller JM. Roget: A versatile physician of the nineteenth century. 1013.

Newman B. Donald E. Wilson MD — Dean of the University of Maryland School of Medicine: An interview with MMJ's editor. 1074.

—J. David Nagel MD. Med Chi president 1991-1992. 353.

Potter WS. Dr. Nathaniel Potter: Contributions to medicine and the University of Maryland. 1089.

Sleeman W. How Richard Gundry came to Maryland. 825.

Wagner HN Jr. Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award [interview by Michelle Burke and Betsy Newman]. 557.

## BLADDER DISEASES

Weiss RD; Hrehorovich VR. An unusual manifestation of Wegener's granulomatosis. 271.

Blitzer MG. see Roop AP.

## BLOOD VESSELS

Zizic TM. Vascular lesions in SLE. 887.

Board of Physician Quality Assurance Actions. Column. 61, 123, 303, 397, 599, 819, 944, 1021, 1106.

## BONE TRANSPLANTATION

Papel ID. Augmentation rhinoplasty utilizing cranial bone grafts. 479.

## BOOK REVIEWS

Donowitz LG. *Infection Control in the Child Care Center and Pre-school*. 832.

King LS. *Transformations in American Medicine*. 419.

Miller NR. *Clinical Neuro-ophthalmology*. 1037.

Boughman JA. see Roop AP.

## BRAIN DISEASES

Tenner MS. Neurosonology: Its place in diagnostic imaging. 579.

## BRAIN NEOPLASMS

Capito PR; Wang H; Brem H; Ahn HS; Bryan RN. Magnetic resonance imaging diagnosis of an intracranial metastasis of adenocarcinoma of the prostate: Case report. 113.

## BREAST NEOPLASMS

Elias EG. Adjuvant therapy in breast cancer patients with negative lymph nodes: An update. 20.

Libre EP. Treatment of early-stage breast cancer: Commentary and counterpoint. 942.

Brem H. see Capito PR.

Bryan RN. see Capito PR.

Buchholz D. see Stern BJ.

Buckingham SC. Physician participation in medical review activities: Immunity and legal defense. 295.

—Protecting the disabled from discrimination. 37.

Burbach JW. see Sauri MA.

Burnett JW. see Giannini SH.

## CALCITONIN

Schneyer CR. Calcitonin and the treatment of osteoporosis. 469.

Calia FM. see Woodward TE.

Cameron JL. Members in the news. 953.

Capito PR; Wang H; Brem H; Ahn HS; Bryan RN. Magnetic resonance imaging diagnosis of an intracranial metastasis of adenocarcinoma of the prostate: Case report. 113.

Caquelin C. see Kaczmarek RG.

## CARDIOMYOPATHY, CONGESTIVE

Alegado EB; Mardelli JT. Peripartum cardiomyopathy: A case study. 281.

## CARCINOMA, BASAL CELL

Grace GT; Elias EG. Metastatic basal cell carcinoma. 799.

## CARCINOMA, SQUAMOUS CELL

Elias EG. The prognostic value of mononucleated cell levels in cancer patients. 267.

## CATHETERIZATION

Bezirdjian DR. Retrieval and unknotting of inadvertently placed intravascular catheters. 381.

## CEREBRAL ANEURYSM

Cohen RJ. The neurosurgical treatment of intracranial aneurysms in the community hospital. 497.

## CEREBRAL ISCHEMIA

Stern BJ; Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part II. 565.

## CEREBROVASCULAR DISORDERS

Stern BJ; Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part I. 453.

Stern BJ; Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part II. 565.

## CERTIFICATION

Miller JM. Medical advertising [letter]. 137.

## CHLORAMPHENICOL

deBorja C; Hrehorovich VR. Rocky Mountain spotted fever: Often a diagnostic dilemma. 367.

A Clinical Moment with ... Diabetes. Column. 22, 95, 225, 257, 391, 438, 594, 649, 815, 947, 1101.

## CLINICAL PROTOCOLS

Schneyer CR. Calcitonin and the treatment of osteoporosis. 469.

## CLINICAL TRIALS

Elias EG. Cancer immunotherapy. Part I: Basic and early clinical trials. 405.

CME Programs. Column. 1041, 1131. (continues Doctors Note. Column.)

Coggin JT. see Sauri MA.

Cohen RJ. The neurosurgical treatment of intracranial aneurysms in the community hospital. 497.

Cohn JA; Warren JW. The HIV epidemic and the primary care physician. 185.

## COLONIC NEOPLASMS

Elias EG. Cancer immunotherapy. Part II: New approaches. 525.

## COLORECTAL NEOPLASMS

Sherer PB. Adjuvant treatment of colorectal cancer: Response to the NIH consensus summary statement. 811.

## COMBINED MODALITY THERAPY

Elias EG. Cancer immunotherapy. Part II: New approaches. 525.

Elias EG; Parnes HL. Conservative treatment of adenocarcinoma of the lower rectum. 87.

Vogel RA. The spectrum of treatment for coronary artery disease: Medical regression to high-risk angioplasty. 219.

## COMPUTER SYSTEMS

Snow DA. Improving preventive care in general medical practice. 181.

Comstock GW. Histoplasmosis is endemic in the Potomac River valley [letter]. 984.

# CONNECTIVE TISSUE DISEASES

Handwerger BS. Blood tests in the diagnosis of connective tissue diseases. 97.

Conrado CA. Rupture of the spleen in non-Hodgkin's lymphoma: A case study. 285.

# CORONARY ARTERY BYPASS

Vogel RA. The spectrum of treatment for coronary artery disease: Medical regression to high-risk angioplasty. 219.

# CORONARY DISEASE

Baltazar RF. Stress testing: Optimal use of the various modalities of stress testing in the diagnosis of coronary artery disease. 501.

Baltazar RF; Grant A; O'Mara V; Effron MB. The use of a low-level stage during exercise testing in predicting severe coronary disease. 1079.

Vogel RA. The spectrum of treatment for coronary artery disease: Medical regression to high-risk angioplasty. 219.

# CRITICAL CARE

Dart R; Patel B; Perez-Alard J; Vaswani S; Yanamadala S. Prognosis of oncology patients receiving intensive care using the APACHE II scoring system. 273.

# CYTOLOGICAL TECHNIQUES

DeBoy JM; Jarboe BR. Maryland's cytology labs: 1989-90 proficiency testing results. 107.

# CYTOLOGY

DeBoy JM; Jarboe BR. Maryland's cytology labs: 1989-90 proficiency testing results. 107.

Daikoku NH. see Sidky I.

Daly MD. Summary of the NIH consensus statement on the treatment of sleep disorders of older people. 1096.

Dart R; Gomer W. Large valvular vegetations in infective endocarditis. 361.

—Patel B; Perez-Alard J; Vaswani S; Yanamadala S. Prognosis of oncology patients receiving intensive care using the APACHE II scoring system. 273.

# DEATH, SUDDEN

Veltri EP; Aarons D; Juanteguy J. The automatic implantable, cardioverter-defibrillator: Update 1990. 463.

deBorja C; Hrehorovich VR. Rocky Mountain spotted fever: Often a diagnostic dilemma. 367.

DeBoy JM; Jarboe BR. Maryland's cytology labs: 1989-90 proficiency testing results. 107.

DeFazio A; Flynn JPG; Kelly MP. Potential for missed diagnosis in rehabilitation patients with a high-risk lifestyle [letter]. 984.

DeLawter DE. Alternatives to the injection of insulin. 1101.

—Diabetes education. 649.

—Drug reps and doctors need each other [editorial]. 773.

—Label reading for health. 22.

—The management of early morning hyperglycemia: Is it due to Somogyi effect or dawn phenomenon? 391.

—Management of hypoglycemic reactions in obese non-insulin dependent diabetes patients. 95.

—Management of a juvenile patient who resists planned diabetic care. 257.

—Self-management of diabetes. 815.

—Tips about handling insulin. 225.

—A "touch of diabetes." 947.

—Why did my symptoms of hypoglycemia change? 594.

Desai PR. see Perez-Alard J.

# DIABETES MELLITUS

DeLawter DE. Diabetes education. 649.

—The management of early morning hyperglycemia: Is it due to Somogyi effect or dawn phenomenon? 391.

—Management of hypoglycemic reactions in obese non-insulin dependent diabetes patients. 95.

—Management of a juvenile patient who resists planned diabetic care. 257.

—Self-management of diabetes. 815.

—Tips about handling insulin. 225.

—A "touch of diabetes." 947.

—Why did my symptoms of hypoglycemia change? 594.

Jensen AD. Diabetes 2000 [commentary]. 1016.

Liss RA; Smith RE; Patz A. American Academy of Ophthalmology: Elimination of preventable blindness from diabetes by the year 2000. 1016.

# DIABETIC RETINOPATHY

Jensen A. Diabetes 2000 [commentary]. 1016.

Liss RA; Smith RE; Patz A. American Academy of Ophthalmology: Elimination of preventable blindness from diabetes by the year 2000. 1016.

# DIAGNOSIS, DIFFERENTIAL

Capito PR; Wang H; Brem H; Ahn HS; Bryan RN. Magnetic resonance imaging diagnosis of an intracranial metastasis of adenocarcinoma of the prostate: Case report. 113.

deBorja C; Hrehorovich VR. Rocky Mountain spotted fever: Often a diagnostic dilemma. 367.

Handwerger BS. Blood tests in the diagnosis of connective tissue diseases. 97.

Johnston SJ; Beaver BL; Sun CJ; Luddy RE; Schwartz AD. Inflammatory pseudotumor of the retroperitoneum. 787.

# DIET

DeLawter DE. Label reading for health. 22.

# DISEASE OUTBREAKS

Cohn JA; Warren JW. The HIV epidemic and the primary care physician. 185.

Doctors Note. Column. 67, 142, 230, 315, 415, 528, 610, 741, 834. (continued as CME Programs. Column.)

# DRUG INDUSTRY

DeLawter DE. Drug reps and doctors need each other [editorial]. 773.

# DRUG INTERACTIONS

Goldstein PJ; Sundaram SG; Manimekalai S. Drug interference on alpha-fetoprotein assays. 513.

# DRUG STORAGE

DeLawter DE. Tips about handling insulin. 225.

Dutta SK. see Schreiber JB.

# ECHOCARDIOGRAPHY

Baltazar RF. Stress testing: Optimal use of the various modalities of stress testing in the diagnosis of coronary artery disease. 501.

Dart R; Gomer W. Large valvular vegetations in infective endocarditis. 361.

# ECHOENCEPHALOGRAPHY

Tenner MS. Neurosonology: Its place in diagnostic imaging. 579.

Edelman R; Levine MM. Enteric vaccines. 199.

# EDUCATION, MEDICAL

Woodward TE; Saunders E; Kushner HA; Mackowiak PA; Calia FM. Clinical care, education, and research at the University of Maryland School of Medicine, 1807-1991. 173.



Effron MB; Morales RE. Thrombolytic therapy for acute myocardial infarction in the 1990s. 485.  
—see also Baltazar RF.

# ELECTRIC COUNTERSHOCK

Veltri EP; Aarons D; Juanteguy J. The automatic implantable cardioverter-defibrillator: Update 1990. 463.

# ELECTRIC STIMULATION

Alicea AE; Veltri EP; Aarons D. Proarrhythmia: disparity of programmed electrical stimulation results and spontaneous occurrence: A case report. 521.

# ELECTROCARDIOGRAPHY

Alicea AE; Veltri EP; Aarons D. Proarrhythmia: Disparity of programmed electrical stimulation results and spontaneous occurrence: A case report. 521.

Baltazar RF. Stress testing: Optimal use of the various modalities of stress testing in the diagnosis of coronary artery disease. 501.

Perez-Alard J; Desai PR; Sirithara R; Papadopoulos C. Correlation of Holter monitoring and left ventricular function to signal-averaged electrocardiogram after myocardial infarction. 375.

# ELECTROCARDIOGRAPHY, AMBULATORY

Ballas SL; Veltri EP. The efficacy of amiodarone in the treatment of refractory nonsustained ventricular tachycardia. 475.

Perez-Alard J; Desai PR; Sirithara R; Papadopoulos C. Correlation of Holter monitoring and left ventricular function to signal-averaged electrocardiogram after myocardial infarction. 375.

Elias EG. Adjuvant therapy in breast cancer patients with negative lymph nodes: An update. 20.

—Cancer immunotherapy. Part I: Basic and early clinical trials. 405.

—Cancer immunotherapy. Part II: New approaches. 525.

—Evaluation of patients with liver tumors for resectability. 647.

—Gastric tumors. 1099.

—Liver resections. 827.

—Parnes HL. Conservative treatment of adenocarcinoma of the lower rectum. 87.

—Prognostic factors after liver resections. 948.

—The prognostic value of mononucleated cell levels in cancer patients. 267.

—see also Grace GT.

# ENDOCARDITIS, BACTERIAL

Dart R; Gomer W. Large valvular vegetations in infective endocarditis. 361.

# EPIDEMIOLOGY

Comstock GW. Histoplasmosis is endemic in the Potomac River valley [letter]. 984.

Winn T; Tayback M; Israel E. Mortality due to septicemia in the elderly: Factors accounting for a rapid rise. 803.

Epidemiology and Disease Control Program. Column. 9, 81, 159, 263, 331, 433, 545, 627, 759, 853, 971, 1059.

# EPOPROSTENOL

Rubin LJ. New concepts in the treatment of primary pulmonary hypertension. 209.

# EPSTEIN-BARR VIRUS

McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.

# EQUIPMENT FAILURE

Bezirdjian DR. Retrieval and unknotting of inadvertently placed intravascular catheters. 381.

# EQUIPMENT SAFETY

Kaczmarek RG; Moore RM; McCrohan J; Israel E; Caquelin C; Reynolds C. Multi-state investigation of needle-handling by health care workers. 989.

# EVANS AMOS A.

Kimble ST. Amos A. Evans MD: Father of American naval medicine. 587.

Evans GE; Hall GD. The 1991 Maryland General Assembly: What can we expect? 27.

Executive Director's Newsletter. Column. see Medical and Chirurgical Faculty. Executive Director's Newsletter. Column.

# EXERCISE TEST

Baltazar RF. Stress testing: Optimal use of the various modalities of stress testing in the diagnosis of coronary artery disease. 501.

—Grant A; O'Mara V; Effron MB. The use of a low-level stage during exercise testing in predicting severe coronary disease. 1079.

Falcão K. Members in the news. 227.

# FALSE NEGATIVE REACTIONS

Feaga WP. Lyme disease [letter; comment]. 138.

# FAMILY PRACTICE

Snow DA. Improving preventive care in general medical practice. 181.

# FATIGUE SYNDROME, CHRONIC

McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.

Feaga WP. Lyme disease [letter; comment]. 138.

Fearnow E. Imaging case of the month: Acoustic neuroma. 1019.

# FEES, MEDICAL

Schanno JF. Provider fee project [letter; comment]. 775.

Feng T. see McCaul M.

# FETAL DEATH

Sidky I; Daikoku NH; Gopal J. Insignificant blunt maternal trauma with lethal fetal outcome: A case report. 1083.

# FIBROMA

Johnston SJ; Beaver BL; Sun CJ; Luddy RE; Schwartz AD. Inflammatory pseudotumor of the retroperitoneum. 787.

Flynn J. see Rabindran E.

Flynn JPG. see DeFazio A.

# FOOD LABELING

DeLawter DE. Label reading for health. 22.

# FOREIGN BODIES

Bezirdjian DR. Retrieval and unknotting of inadvertently placed intravascular catheters. 381.

# FORENSIC MEDICINE

Buckingham SC. Physician participation in medical review activities: Immunity and legal defense. 295.

Fox RL. see Sauri MA.

# GASTROENTEROLOGY

Schreiber JB; Meltzer SJ; Dutta SK. Frontiers in gastroenterology: New clinical and research opportunities. 205.

# GASTROINTESTINAL DISEASES

Edelman R; Levine MM. Enteric vaccines. 199.

# GASTROINTESTINAL NEOPLASMS

Elias EG. Gastric tumors. 1099.

## GENE EXPRESSION REGULATION

Wilber JF. The human thyrotropin-releasing hormone gene: An application of molecular biology to contemporary endocrinology research. 195.

Gershen BJ. Eponyms. 1032.

—Eponyms II. 1109.

—A medical lexicon from mythology. 407.

—The Quaker and the Jew. 764.

—"Say something in medicine for us." 299.

Giannini SH; Burnett JW. Leishmaniasis: An undesirable import. 1011.

Giargiana FA. Members in the news. 141.

Gibson RW. Members in the news. 1035.

Gill FA. Members in the news. 737.

## GLAUCOMA

Pollack IP. Glaucoma treatment and the laser revolution. 493.

## GLOMERULOSCLEROSIS, FOCAL

Josselson J. HIV-associated nephropathy: Report of a case and review of the literature. 191.

## GLUCOSE TOLERANCE TEST

DeLawter DE. A "touch of diabetes." 947.

Goldstein PJ; Sundaram SG; Manimekalai S. Drug interference on alpha-fetoprotein assays. 513.

Gomer W. see Dart R.

Gopal J. see Sidky I.

Grace GT; Elias EG. Metastatic basal cell carcinoma. 799.

Grant A. see Baltazar RF.

Griffith LS. see Ballas SL.

## GUNDRY, RICHARD

Sleeman W. How Richard Gundry came to Maryland. 825.

Hall GD. see Evans GE.

Hannan SE. Marcia C. Noyes: Making a life. 311.

## HANDICAPPED

Buckingham SC. Protecting the disabled from discrimination. 37.

Handwerger BS. Blood tests in the diagnosis of connective tissue diseases. 97.

Hauptman HW. Variants/subsets of SLE. 909.

## HEAD AND NECK NEOPLASMS

Elias EG. The prognostic value of mononucleated cell levels in cancer patients. 267.

## HEADACHE

DeLawter DE. Why did my symptoms of hypoglycemia change? 594.

## HEALTH FACILITIES

Kopf R; Matricciani RM. The new Patient Self-determination Act: How this law will affect the Maryland physician. 395.

## HEARING AIDS

McDonald JM. When is it appropriate to prescribe hearing aids for patients ... and when not? 583.

## HEARING DISORDERS

McDonald JM. When is it appropriate to prescribe hearing aids for patients ... and when not? 583.

## HEARING LOSS

McDonald JM. When is it appropriate to prescribe hearing aids for patients ... and when not? 583.

## HEART DISEASES

Veltri EP; Aarons D; Juanteguy J. The automatic implantable cardioverter-defibrillator: Update 1990. 463.

## HEART FAILURE

Ballas SL; Baughman KL; Griffith LS; Veltri EP. Mexiletine-associated left ventricular dysfunction: A case study. 519.

## HEART-LUNG TRANSPLANTATION

Rubin LJ. New concepts in the treatment of primary pulmonary hypertension. 209.

## HEART VALVE DISEASES

Dart R; Gomer W. Large valvular vegetations in infective endocarditis. 361.

Hellmann DB. Medical therapy for SLE. 923.

## HEMATOLOGIC TESTS

Handwerger BS. Blood tests in the diagnosis of connective tissue diseases. 97.

Hennessy RG. Members in the news. 252.

Highsmith H. see Rabindran E.

Hildreth CJ; Saunders E. Hypertension in blacks. 213.

## HISTOPLASMOSIS

Comstock GW. Histoplasmosis is endemic in the Potomac River valley [letter]. 984.

Sauri MA; Julie NL; Juarbe HM; Mayo FJ; Ligon CH; Fox RL; Koss G; Coggin JT; Burbach JW; Barton JH et al. Disseminated histoplasmosis in AIDS patients in Maryland. 573.

## HISTORY OF MEDICINE

Harman SE. Marcia C. Noyes: Making a life. 311.

Hochberg MC. The history of lupus erythematosus. 871.

Kastor JA. Medicine at Maryland: 1807-1991. 171.

Kimble ST. Amos A. Evans MD: Father of American naval medicine. 587.

Miller JM. Roget: A versatile physician of the nineteenth century. 1013.

Newman B. Donald E. Wilson MD — Dean of the University of Maryland School of Medicine: An interview with MMJ's editor. 1074.

—J. David Nagel MD. Med Chi president 1991-1992. 353.

Potter WS. Dr. Nathaniel Potter: Contributions to medicine and the University of Maryland. 1089.

Sabin AB. Medicine and public health in Baltimore during the early years of the Sinai Hospital of Baltimore [letter]. 1063.

Sleeman W. How Richard Gundry came to Maryland. 825.

Wagner HN Jr. Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award [interview by Michelle Burke and Betsy Newman]. 557.

Woodward TE; Saunders E; Kushner HA; Mackowiak PA; Calia FM. Clinical care, education and research at the University of Maryland School of Medicine, 1807-1991. 173.

## HIV INFECTIONS

Cohn JA; Warren JW. The HIV epidemic and the primary care physician. 185.

Josselson J. HIV-associated nephropathy: Report of a case and review of the literature. 191.

Stern BJ; Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part II. 565.

Hochberg MC. The history of lupus erythematosus. 871.

Holder LE. Members in the news. 953.



## HOMOSEXUALITY

Josselson J. HIV-associated nephropathy: Report of a case and review of the literature. 191.

## HOSPITALS, COMMUNITY

Cohen RJ. The neurosurgical treatment of intracranial aneurysms in the community hospital. 497.

Hrehorovich VR. see deBorja C.

—see also Weiss RD.

## HYPEREMESIS GRAVIDARUM

Trachtenberg D. Clinical observations: Hyperemesis gravidarum treated with lorazepam. 810.

## HYPERGLYCEMIA

DeLawter DE. The management of early morning hyperglycemia: Is it due to Somogyi effect or dawn phenomenon? 391.

## HYPERTENSION

Hildreth CJ; Saunders E. Hypertension in blacks. 213.

## HYPERTENSION, PULMONARY

Rubin LJ. New concepts in the treatment of primary pulmonary hypertension. 209.

## HYPOGLYCEMIA

DeLawter DE. Management of hypoglycemic reactions in obese non-insulin-dependent diabetes patients. 95.

—Why did my symptoms of hypoglycemia change? 594.

## IBUPROFEN

McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.

Imaging Case of the Month. Column. 1019.

## IMMUNOENZYME TECHNIQUES

Goldstein PJ; Sundaram SG; Manimekalai S. Drug interference on alpha-fetoprotein assays. 513.

## IMMUNOTHERAPY

Elias EG. Cancer immunotherapy. Part I: Basic and early clinical trials. 405.

## IMPLANTS, ARTIFICIAL

Veltri EP; Aarons D; Juanteguy J. The automatic implantable cardioverter-defibrillator: Update 1990. 463.

## INFANT, NEWBORN, DISEASES

Tenner MS. Neurosonology: Its place in diagnostic imaging. 79.

## INSULIN

DeLawter DE. The management of early morning hyperglycemia: Is it due to Somogyi effect or dawn phenomenon? 391.

—Tips about handling insulin. 225.

—Why did my symptoms of hypoglycemia change?

## INSURANCE, ACCIDENT

Evans GE; Hall GD. The 1991 Maryland General Assembly: What can we expect? 27.

## ISONIAZID

Rabindran E; Matuszak DL; Israel E; Woodall H; Highsmith H; Flynn J. Preventive therapy for tuberculosis in Maryland. 793.

Israel E. see Kaczmarek RG.

—see also Rabindran E.

—see also Winn T.

Jarboe BR. see DeBoy JM.

Jensen AD. Diabetes 2000 [commentary]. 1016.

—Members in the news. 252.

Johnston SJ; Beaver BL; Sun CJ; Luddy RE; Schwartz AD. Inflammatory pseudotumor of the retroperitoneum. 787.

Josselson J. HIV-associated nephropathy: Report of a case and review of the literature. 191.

Juanteguy J. see Veltri EP.

Juarbe HM. see Sauri MA.

Julie NL. see Sauri MA.

## JURISPRUDENCE

Buckingham SC. Physician participation in medical review activities: Immunity and legal defense. 295.

Kastor JA. Medicine at Maryland: 1807-1191. 171.

Kaczmarek RG; Moore RM; McCrohan J; Israel E; Caquelin C; Reynolds C. Multi-state investigation of needle-handling by health care workers. 989.

Kelly MP. see DeFazio A.

## KETOCONAZOLE

Sauri MA; Julie NL; Juarbe HM; Mayo FJ; Ligon CH; Fox RL; Koss G; Coggin JT; Burbach JW; Barton JH et al. Disseminated histoplasmosis in AIDS patients in Maryland. 573.

## KIDNEY FAILURE, ACUTE

Benner M; Rossler D. Rhabdomyolysis and acute renal failure: A review of two cases. 373.

Kimble ST. Amos A. Evans MD: Father of American naval medicine. 587.

King TM. Members in the news. 953.

Kittner S. see Stern BJ.

Knipp HC. Members in the news. 953.

Kopf R; Matricciani RM. The new Patient Self-determination Act: How this law will affect the Maryland physician. 395.

Koss G. see Sauri MA.

Kushner HA. see Woodward TE.

## LABORATORIES

Lee-Llacer RL. It works when we all are together — physicians and representatives alike... [letter]. 15.

Lancelotta CJ. Members in the news. 65.

## LASER SURGERY

Pollack IP. Glaucoma treatment and the laser revolution. 493.

Laughlin HP. Members in the news. 141, 542.

Lee-Llacer RL. It works when we all are together — physicians and representatives alike... [letter]. 15.

## LEGISLATION

Buckingham SC. Protecting the disabled from discrimination. 37.

## LEGISLATION, MEDICAL

Evans GE; Hall GD. The 1991 Maryland General Assembly: What can we expect? 27.

Legislative Directory. see Medical and Chirurgical Faculty. Maryland State Legislative Directory.

## LEISHMANIASIS

Giannini SH; Bumett JW. Leishmaniasis: An undesirable import. 1011.

## LEUKEMIA

Dart R; Patel B; Perez-Alard J; Vaswani S; Yanamadala S. Prognosis of oncology patients receiving intensive care using the APACHE II scoring system. 273.

## LEUKOCYTE COUNT

Elias EG. The prognostic value of mononucleated cell levels in cancer patients. 267.

Levine MM. see Edelman R.

## LIBRARIES, MEDICAL

Harman SE. Marcia C. Noyes: Making a life. 311.

Library Page. Column. 311, 825.

Libre EP. Treatment of early-stage breast cancer: Commentary and counterpoint. 942.

## LICENSURE

DeBoy JM; Jarboe BR. Maryland's cytology labs: 1989-90 proficiency testing results. 107.

Lichtenfeld JL. Members in the news. 65.

—Resource-based relative value scale [letter]. 774.

Ligon CH. see Sauri MA.

Liss RA; Smith RE; Patz A. American Academy of Ophthalmology: Elimination of preventable blindness from diabetes by the year 2000. 1016.

Liteanu M. Members in the news. 737.

## LIVER DISEASES

Elias EG. Evaluation of patients with liver tumors for resectability. 647.

—Liver resections. 827.

## LIVER NEOPLASMS

Elias EG. Prognostic factors after liver resections. 948.

## LORAZEPAM

Trachtenberg D. Clinical observations: Hyperemesis gravidarum treated with lorazepam. 810.

Luddy RE. see Johnston SJ.

## LUPUS ERYTHEMATOSUS, SYSTEMIC

Hauptman HW. Variants/subsets of SLE. 909.

Hellmann DB. Medical therapy for SLE. 923.

Hochberg MC. The history of lupus erythematosus. 869.

Repke JT; Petri M. Management of the pregnant lupus patient. 917.

Stevens MB. The clinical spectrum of SLE. 875.

Sutton JD. SLE: Management overview. 935.

Ziminski CM. Autoantibodies and SLE. 901.

Zizic TM. Vascular lesions in SLE. 887.

## LYME DISEASE

Feaga WP. Lyme disease [letter; comment]. 138.

## LYMPHOCYTES

Elias EG. The prognostic value of mononucleated cell levels in cancer patients. 267.

## LYMPHOMA, SMALL CLEAVED-CELL, FOLLICULAR

Conrado CA. Rupture of the spleen in non-Hodgkin's lymphoma: A case study. 285.

Mackowiak PA. see Woodward TE.

## MAGNETIC RESONANCE IMAGING

Capito PR; Wang H; Brem H; Ahn HS; Bryan RN. Magnetic resonance imaging diagnosis of an intracranial metastasis of adenocarcinoma of the prostate: Case report. 113.

Manimekalai S. see Goldstein PJ.

Manson PN. Members in the news. 409.

Mardelli JT. see Alegado EB.

Maryland. Epidemiology and Disease Control Program. Column. see Epidemiology and Disease Control Program. Column.

Maryland. Legislative Directory. see Medical and Chirurgical Faculty. Maryland State Legislative Directory.

Maryland Oncology Newsletter. Column. 20, 87, 267, 405, 525, 647, 827, 948, 1099.

## MASS SCREENING

Rabindran E; Matuszak DL; Israel E; Woodall H; Highsmith H; Flynn J. Preventive therapy for tuberculosis in Maryland. 793.

Matricciani RM.

—The Omnibus Budget Reconciliation Act of 1990. 117.

—Special announcement: AMA awarded SuperPRO contract. 96A.

—see also Kopf R.

—see also Ruderman R.

Matuszak DL. see Rabindran E.

Mayo FJ. see Sauri MA.

McCaul M. Svikis DS; Feng T. Pregnancy and addiction: Outcomes and interventions. 995.

McCrohan J. see Kaczmarek RG.

McDonald JM. When is it appropriate to prescribe hearing aids for patients ... and when not? 583.

McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.

## MEDICAID

Matricciani RM. The Omnibus Budget Reconciliation Act of 1990. 117.

Schanno JF. Provider fee project [letter; comment]. 775.

Medical and Chirurgical Faculty.

—Ad Hoc Committee on Physician Licensure Regulations. 1990-91 Report to the House of Delegates. 701.

—Ad Hoc Therapeutic and Formulary Committee. 1990-91 Report to the House of Delegates. 712.

—American Medical Association Education and Research Foundation (AMA-ERF). 1990-91 Report to the House of Delegates. 717.

—Annual Reports of Committees. 1990-91 Committee Reports. 671.

—Annual Reports of Committees. Index. 621.

—Auxiliary. Column. 224, 290, 829, 949, 1029, 1104.

—Auxiliary. 1990-91 Report to the House of Delegates. 717.

—Bylaws Committee. 1990-91 Report to the House of Delegates. 673.

—Committee on AIDS. 1990-91 Report to the House of Delegates. 671.

—Committee on Alcoholism and Chemical Dependency. 1990-91 Report to the House of Delegates. 672.

—Committee on Drugs. 1990-91 Report to the House of Delegates. 678.

—Committee on Hospital Medical Staffs. 1990-91 Report to the House of Delegates. 680.

—Committee on Long-term Care and Geriatrics. 1990-91 Report to the House of Delegates. 690.

—Committee on Managed Care and Third Party Liaison. 1990-91 Report to the House of Delegates. 690.

—Committee on Medicine and Religion. 1990-91 Report to the House of Delegates. 696.

—Committee on Mental Health. 1990-91 Report to the House of Delegates. 696.

—Committee on Physician Rehabilitation. 1990-91 Report to the House of Delegates. 702.

—Committee on Professional Ethics. 1990-91 Report to the House of Delegates. 703.

—Committee on Public Health. 1990-91 Report to the House of Delegates. 705.

—Committee on Public Relations. 1990-91 Report to the House of Delegates. 707.

—Committee on Scientific Activity. 1990-91 Report to the House of Delegates. 709.



- Committee on Small Area Practice Variation. 1990-91 Report to the House of Delegates. 710.
- Committee on Specialist Identification. 1990-91 Report to the House of Delegates. 710.
- Committee on Specialty Societies. 1990-91 Report to the House of Delegates. 711.
- Committee on Young Physicians. 1990-91 Report to the House of Delegates. 713.
- Computers in Medicine Committee. 1990-91 Report to the House of Delegates. 676.
- Continuing Medical Education Review Committee. 1990-91 Report to the House of Delegates. 677.
- Council. (393rd Meeting) September 13, 1991. Minutes. 1117.
- Delegates to the AMA House of Delegates. 1990-91 Report to the House of Delegates. 1990 Interim Meeting of the AMA House of Delegates. 721.
- Emergency Medical Services Committee. 1990-91 Report to the House of Delegates. 678.
- Executive Director. Executive Director's Newsletter. 17, 91, 167, 259, 341, 441, 553, 635, 767, 859, 979, 1067.
- Executive Director. 1990-91 Report to the House of Delegates. 718.
- Finance Committee. 1990-91 Report to the House of Delegates. 679.
- Focused Professional Education Committee. 1990-91 Report to the House of Delegates. 680.
- House of Delegates. (333rd Annual Meeting) (193rd Annual Session) May 8, 1991. Minutes. 653.
- House of Delegates. (334th Annual Meeting) (193rd Annual Session) May 10, 1991. Minutes. 665.
- House of Delegates. (335th Annual Meeting) September 14, 1991. Minutes. 1120.
- Immunizations and Infectious Disease Subcommittee. 1990-91 Report to the House of Delegates. 681.
- Laboratory Regulations Subcommittee. 1990-91 Report to the House of Delegates. 682.
- Legislative Committee. 1990-91 Report to the House of Delegates. 683.
- Liaison Committee with the Medical Assistance Program. 1990-91 Report to the House of Delegates. 693.
- Library and History Committee. 1990-91 Report to the House of Delegates. 689.
- Maryland Medical Journal Editorial Board. 1990-91 Report to the House of Delegates. 691.
- Maryland Medical Political Action Committee. 1990-91 Report to the House of Delegates. 692.
- Maryland State Legislative Directory. 43.
- Maternal Welfare Subcommittee. 1990-91 Report to the House of Delegates. 693.
- Med Chi Insurance Fund. 1990-91 Report to the House of Delegates. 726.
- Medicolegal Committee. 1990-91 Report to the House of Delegates. 696.
- Music Medicine Clearinghouse Committee. 1990-91 Report to the House of Delegates. 696.
- Nominating Committee. 1990-91 Report to the House of Delegates. 698.
- Occupational Health Committee. 1990-91 Report to the House of Delegates. 699.
- Peer Review Committee. 1990-91 Report to the House of Delegates. 699.
- Peer Review Management Committee. 1990-91 Report to the House of Delegates. 700.

- Physician/Patient Relations Committee. 1990-91 Report to the House of Delegates. 701.
- Policy and Planning Committee. 1990-91 Report to the House of Delegates. 702.
- Professional Review Organization Monitoring Committee. 1990-91 Report to the House of Delegates. 704.
- Public Relations Committee. 1990-91 Report to the House of Delegates. 707.
- Resident Component Society. 1990-91 Report to the House of Delegates. 727.
- Student Component Society. 1990-91 Report to the House of Delegates. 727.
- Subcommittee on Medical Radiation Technologist Regulations. 1990-91 Report to the House of Delegates. 695.
- Treasurer. 1990-91 Report to the House of Delegates. 727.
- Women in Medicine Ad Hoc Committee. 1990-91 Report to the House of Delegates. 712.

Medical Miscellany. Column. 64, 411, 739, 833, 849, 1111.

#### MEDICARE

- Lichtenfeld JL. Resource-based relative value scale [letter]. 774.
- Matricciani RM. The Omnibus Budget Reconciliation Act of 1990. 117.
- Ruderman R; Matricciani RM. DEMPAQ: Development and evaluation of methods to promote ambulatory care quality. 643.

Meltzer SJ. see Schreiber JB.

Members in the News. Column. 65, 141, 227, 252, 409, 542, 737, 953, 1035.

#### MEXILETINE

- Ballas SL; Baughman KL; Griffith LS; Veltri EP. Mexiletine-associated left ventricular dysfunction: A case study. 519.

Meyd C. see Stern BJ.

Meyerhoff J. see Stern BJ.

Miller JM. Medical advertising [letter]. 137.

- Rogot: A versatile physician of the nineteenth century. 1013.
- Specialty status [letter]. 336.

#### MOLECULAR PROBE TECHNIQUES

- Wilber JF. The human thyrotropin-releasing hormone gene: An application of molecular biology to contemporary endocrinology research. 195.

#### MONITORING, PHYSIOLOGIC

- DeLawter DE. Self-management of diabetes. 815.

#### MONOCYTES

- Elias EG. The prognostic value of mononucleated cell levels in cancer patients. 267.

Moore RM. see Kaczmarek RG.

Morales RE. see Effron MB.

#### MUSCLES

- McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.

#### MYOCARDIAL INFARCTION

- Effron MB; Morales RE. Thrombolytic therapy for acute myocardial infarction in the 1990s. 485.
- Perez-Alard J; Desai PR; Sirithara R; Papadopoulos C. Correlation of Holter monitoring and left ventricular function to signal-averaged electrocardiogram after myocardial infarction. 375.
- Riaz SM; Selonick M. Myocardial infarction in pulmonary edema. 279.

## MYOCARDITIS

Alegado EB; Mardelli JT. Peripartum cardiomyopathy: A case study. 281.

## NAGEL, J. DAVID

Newman B. J. David Nagel MD. Med Chi president 1991-1992. 353.

Nakazawa H. Members in the news. 737.

## NAVAL MEDICINE

Kimble ST. Amos A. Evans MD: Father of American naval medicine. 587.

## NEEDLES

Kaczmarek RG; Moore RM; McCrohan J; Israel E; Caquelin C; Reynolds C. Multi-state investigation of needle-handling by health care workers. 989.

## NEGROID RACE

Hildreth CJ; Saunders E. Hypertension in blacks. 213.

## NEOPLASM METASTASIS

Grace GT; Elias EG. Metastatic basal cell carcinoma. 799.

## NEOPLASM STAGING

Elias EG; Parnes HL. Conservative treatment of adenocarcinoma of the lower rectum. 87.  
—The prognostic value of mononucleated cell levels in cancer patients. 267.

## NEOPLASMS

Dart R; Patel B; Perez-Alard J; Vaswani S; Yanamadala S. Prognosis of oncology patients receiving intensive care using the APACHE II scoring system. 273.  
Elias EG. Cancer immunotherapy. Part I: Basic and early clinical trials. 405.  
Stern BJ; Kitner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part II. 565.

## NEUROMA, ACOUSTIC

Fearnow E. Imaging case of the month: Acoustic neuroma. 1016.

## NEUROSURGERY

Cohen RJ. The neurosurgical treatment of intracranial aneurysms in the community hospital. 497.

Newman B. Donald E. Wilson MD — Dean of the University of Maryland School of Medicine: An interview with MMJ's editor. 1074.

—J. David Nagel MD. Med Chi president 1991-1992. 353.

## NOSE DEFORMITIES, ACQUIRED

Papel ID. Augmentation rhinoplasty utilizing cranial bone grafts. 479.

## NOYES, MARCIA C.

Harman SE. Marcia C. Noyes: Making a life. 311.

## NUCLEAR MEDICINE

Wagner HN Jr. Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award [interview by Michelle Burke and Betsy Newman]. 557.

## OBESITY

DeLawter DE. Management of hypoglycemic reactions in obese non-insulin-dependent diabetes patients. 95.

O'Mara V. see Baltazar RF.

## OPPORTUNISTIC INFECTIONS

Sauri MA; Julie NL; Juarbe HM; Mayo FJ; Ligon CH; Fox RL; Koss G; Coggin JT; Burbach JW; Barton JH et al. Disseminated histoplasmosis in AIDS patients in Maryland. 573.

## OSTEOPOROSIS, POSTMENOPAUSAL

Schneyer CR. Calcitonin and the treatment of osteoporosis. 469.

Papadopoulos C. see Perez-Alard J.

Papel ID. Augmentation rhinoplasty utilizing cranial bone grafts. 479.

Parnes C. Members in the news. 252.

Parnes HL. see Elias EG.

Patel B. see Dart R.

## PATIENT CARE TEAM

Sutton JD. SLE: Management overview. 935.

## PATIENT COMPLIANCE

DeLawter DE. Management of a juvenile patient who resists planned diabetic care. 257.

## PATIENT EDUCATION

DeLawter DE. Diabetes education. 649.

—Management of hypoglycemic reactions in obese non-insulin-dependent diabetes patients. 95.

—Self-management of diabetes. 815.

## PATIENT PARTICIPATION

Kopf R; Matricciani RM. The new Patient Self-determination Act: How this law will affect the Maryland physician. 395.

Patz A. see Liss RA.

Paul D. Members in the news. 737.

## PEER REVIEW

Buckingham SC. Physician participation in medical review activities: Immunity and legal defense. 295.

Matricciani RM. Special announcement: AMA awarded Super PRO contract. 96A.

Perez-Alard J; Desai PR; Sirithara R; Papadopoulos C. Correlation of Holter monitoring and left ventricular function to signal-averaged electrocardiogram after myocardial infarction. 375.

—see also Dart R.

Petri M. see Repke JT.

## PHYSICIAN'S ROLE

Cohn JA; Warren JW. The HIV epidemic and the primary care physician. 185.

Kopf R; Matricciani RM. The new Patient Self-determination Act: How this law will affect the Maryland physician. 395.

## PHYSICIANS

Buckingham SC. Physician participation in medical review activities: Immunity and legal defense. 295.

## PHYSICIANS, FAMILY

Cohn JA; Warren JW. The HIV epidemic and the primary care physician. 185.

Platman SR. Members in the news. 737.

Pollack IP. Glaucoma treatment and the laser revolution. 493.

## POSTOPERATIVE COMPLICATIONS

Elias EG. Liver resections. 827.

## POTTER, NATHANIEL

Potter WS. Dr. Nathaniel Potter: Contributions to medicine and the University of Maryland. 1089.

Potter WS. Dr. Nathaniel Potter: Contributions to medicine and the University of Maryland. 1089.

## PREGNANCY

Goldstein PJ; Sundaram SG; Manimekalai S. Drug interference on alpha-fetoprotein assays. 513.

McCaul M; Svikis DS; Feng T. Pregnancy and addiction: Outcomes and interventions. 995.



## PREGNANCY COMPLICATIONS

Repke JT; Petri M. Management of the pregnant lupus patient. 917.

Roop AP; Boughman JA; Blitzer MG. Study of the relationship between elevated maternal serum alpha-fetoprotein and adverse pregnancy outcome. 775.

## PREGNANCY COMPLICATIONS, CARDIOVASCULAR

Alegado EB; Mardelli JT. Peripartum cardiomyopathy: A case study. 281.

Stern BJ; Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part II. 565.

## PREGNANCY OUTCOME

McCaul M; Svikis DS; Feng T. Pregnancy and addiction: Outcomes and interventions. 995.

Roop AP; Boughman JA; Blitzer MG. Study of the relationship between elevated maternal serum alpha-fetoprotein and adverse pregnancy outcome. 775.

Sidky I; Daikoku NH; Gopal J. Insignificant blunt maternal trauma with lethal fetal outcome: A case report. 1083.

## PREJUDICE

Buckingham SC. Protecting the disabled from discrimination. 37.

## PREMENSTRUAL SYNDROME

Backerman IA. Premenstrual syndrome: Update 1991. 1003.

## PREVENTIVE HEALTH SERVICES

Rabindran E; Matuszak DL; Israel E; Woodall H; Highsmith H; Flynn J. Preventive therapy for tuberculosis in Maryland. 793.

Snow DA. Improving preventive care in general medical practice. 181.

Price T. see Stern BJ.

## PROFESSIONAL REVIEW ORGANIZATIONS

Matricciani RM. Special announcement: AMA awarded SuperPRO contract. 96A.

## PROSTATIC NEOPLASMS

Capito PR; Wang H; Brem H; Ahn HS; Bryan RN. Magnetic resonance imaging diagnosis of an intracranial metastasis of adenocarcinoma of the prostate: Case report. 113.

## PUBLIC HEALTH

Sabin AB. Medicine and public health in Baltimore during the early years of the Sinai Hospital of Baltimore [letter]. 1063.

## PUERPERAL DISORDERS

Alegado EB; Mardelli JT. Peripartum cardiomyopathy: A case study. 281.

## PULMONARY EDEMA

Riaz SM; Selonick M. Myocardial infarction in pulmonary edema. 279.

## QUALITY OF HEALTH CARE

Ruderman R; Matricciani RM. DEMPAQ: Development and evaluation of methods to promote ambulatory care quality. 643.

Quality Practice Digest. Column. 117, 295, 395, 643.

## QUINIDINE

Alicea AE; Veltri EP; Aarons D. Proarrhythmia: Disparity of programmed electrical stimulation results and spontaneous occurrence: A case report. 521.

Rabindran E; Matuszak DL; Israel E; Woodall H; Highsmith H; Flynn J. Preventive therapy for tuberculosis in Maryland. 793.

## RADIOIMMUNOASSAY

Goldstein PJ; Sundaram SG; Manimekalai S. Drug interference on alpha-fetoprotein assays. 513.

## RECTAL NEOPLASMS

Elias EG; Parnes HL. Conservative treatment of adenocarcinoma of the lower rectum. 87.

Reeder JD. Members in the news. 1035.

## REHABILITATION

DeFazio A; Flynn JPG; Kelly MP. Potential for missed diagnosis in patients with a high-risk lifestyle [letter]. 984.

Reichmister JP. Members in the news. 252.

## RELATIVE VALUE SCALES

Lichtenfeld JL. Resource-based relative value scale [letter]. 774.

Repke JT; Petri M. Management of the pregnant lupus patient. 917.

Resnick HLP. Members in the news. 542.

## RESPIRATORY TRACT INFECTIONS

McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.

Reynolds C. see Kaczmarek RG.

## RHABDOMYOLYSIS

Benner M; Rossler D. Rhabdomyolysis and acute renal failure: A review of two cases. 373.

## RHEUMATIC DISEASES

Stern BJ; Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part II. 565.

## RHINOPLASTY

Papel ID. Augmentation rhinoplasty utilizing cranial bone grafts. 479.

Riaz SM; Selonick M. Myocardial infarction in pulmonary edema. 279.

Rigamonti D. see Stern BJ.

## ROCKY MOUNTAIN SPOTTED FEVER

deBorja C; Hrehorovich VR. Rocky Mountain spotted fever: Often a diagnostic dilemma. 367.

## ROGET, PETER MARK

Miller JM. Roget: A versatile physician of the nineteenth century. 1013.

Roop AP; Boughman JA; Blitzer MG. Study of the relationship between elevated maternal serum alpha-fetoprotein and adverse pregnancy outcome. 775.

Rossler D. see Benner M.

Rubin LJ. New concepts in the treatment of primary pulmonary hypertension. 209.

Ruderman R; Matricciani RM. DEMPAQ: Development and evaluation of methods to promote ambulatory care quality. 643.

Ryan JJ. Members in the news. 1035.

Sabin AB. Medicine and public health in Baltimore during the early years of the Sinai Hospital of Baltimore [letter]. 1063.

Saunders E. see Hildreth CJ.

—see also Woodward TE.

Sauri MA; Julie NL; Juarbe HM; Mayo FJ; Ligon CH; Fox RL; Koss G; Coggin JT; Burbach JW; Barton JH; et. al. Disseminated histoplasmosis in AIDS patients in Maryland. 573.

Schanno JF. Provider fee project [letter; comment]. 775.

## SCHOOLS, MEDICAL

Kastor JA. Medicine at Maryland: 1807-1991. 171.

Woodward TE; Saunders E; Kushner HA; Mackowiak PA; Calia FM. Clinical care, education, and research at the University of Maryland School of Medicine, 1807-1991. 173.

- Schneyer CR. Calcitonin and the treatment of osteoporosis. 469.
- Schreiber JB; Meltzer SJ; Dutta SK. *Frontiers in gastroenterology: New clinical and research opportunities.* 205.
- Schwartz AD. see Johnston SJ.
- Seidman SB. Members in the news. 737.
- Selonick M. see Riaz SM.
- SEPTICEMIA**  
Winn T; Tayback M; Israel E. Mortality due to septicemia in the elderly: Factors accounting for a rapid rise. 803.
- SEVERITY OF ILLNESS INDEX**  
Dart R; Patel B; Perez-Alard J; Vaswani S; Yanamadala S. Prognosis of oncology patients receiving intensive care using the APACHE II scoring system. 273.
- Sherer PB. Adjuvant treatment of colorectal cancer: Response to the NIH consensus summary statement. 811.
- Sidky I; Daikoku NH; Gopal J. Insignificant blunt maternal trauma with lethal fetal outcome: A case report. 1083.
- Sirithara R. see Perez-Alard J.
- SKIN NEOPLASMS**  
Grace GT; Elias EG. Metastatic basal cell carcinoma. 799.
- SKULL**  
Papel ID. Augmentation rhinoplasty utilizing cranial bone grafts. 479.
- Sleeman W. How Richard Gundry came to Maryland. 825.
- SLEEP DISORDERS**  
Daly MP. Summary of the NIH consensus statement on the treatment of sleep disorders of older people. 1096.
- Sloan M. see Stern BJ.
- Smith RE. see Liss RA.
- Snow DA. Improving preventive care in general medical practice. 181.
- SOCIETIES, MEDICAL**  
Newman, B. J. David Nagel MD. Med Chi president 1991-1992. 353.
- SPASM**  
McGuire TA. Recurrent upper respiratory infection, persistent paravertebral thoracolumbar muscle spasm, and fatigue associated with chronic active Epstein-Barr virus infection. 595.
- SPECIALTIES, MEDICAL**  
Miller JM. Medical advertising [letter]. 137.  
—Specialty status [letter]. 336.
- SPECIALTY BOARDS**  
Miller JM. Specialty status [letter]. 336.
- SPLENIC NEOPLASMS**  
Conrado CA. Rupture of the spleen in non-Hodgkin's lymphoma: A case study. 285.
- SPLENIC RUPTURE**  
Conrado CA. Rupture of the spleen in non-Hodgkin's lymphoma: A case study. 285.
- Stern BJ; Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part I. 453.  
—Kittner S; Sloan M; Meyd C; Buchholz D; Rigamonti D; Woody R; Meyerhoff J; Bell W; Price T. Stroke in the young. Part II. 565.
- Stevens MB. The clinical spectrum of SLE. 875.  
—Members in the news. 227.

**STROKE VOLUME**

- Ballas SL; Baughman KL; Griffith LS; Veltri EP. Mexiletine-associated left ventricular dysfunction: A case study. 519.
- Ballas SL; Veltri EP. The efficacy of amiodarone in the treatment of refractory nonsustained ventricular tachycardia. 475.
- SUBSTANCE ABUSE**  
DeFasio A; Flynn JPG; Kelly MP. Potential for missed diagnosis in rehabilitation patients with a high-risk lifestyle [letter]. 984.
- SUBSTANCE DEPENDENCE**  
McCaul M; Svikis DS; Feng T. Pregnancy and addiction: Outcomes and interventions. 995.
- Sun CJ. see Johnston SJ.
- Sundaram SG. see Goldstein PJ.
- Sutton JD. SLE: Management overview. 935.
- Svikis DS. see McCaul M.
- TACHYCARDIA**  
Ballas SL; Baughman KL; Griffith LS; Veltri EP. Mexiletine-associated left ventricular dysfunction: A case study. 519.
- Ballas SL; Veltri EP. The efficacy of amiodarone in the treatment of refractory nonsustained ventricular tachycardia. 475.
- Tayback M. see Winn T.
- Tenner MS. Neurosonology: Its place in diagnostic imaging. 579.
- Tepper M. Members in the news. 542.
- TETRACYCLINE**  
deBorja C; Hrehorovich VR. Rocky Mountain spotted fever: Often a diagnostic dilemma. 367.
- THROMBOLYTIC THERAPY**  
Elfron MB; Morales RE. Thrombolytic therapy for acute myocardial infarction in the 1990s. 485.
- THYROTROPIN**  
Wilber JF. The human thyrotropin-releasing hormone gene: An application of molecular biology to contemporary endocrinology research. 195.
- THYROTROPIN-RELEASING HORMONE**  
Wilber JF. The human thyrotropin-releasing hormone gene: An application of molecular biology to contemporary endocrinology research.
- TORSADES DE POINTES**  
Alicia AE; Veltri EP; Aarons D. Proarrhythmia: Disparity of programmed electrical stimulation results and spontaneous occurrence: A case report. 521.
- Trachtenberg D. Clinical observations: Hyperemesis gravidarum treated with lorazepam. 810.
- TRICUSPID VALVE INSUFFICIENCY**  
Dart R; Gomer W. Large valvular vegetations in infective endocarditis. 361.
- Trotsky MB. Members in the news. 65.
- TUBERCULOSIS**  
Rabindran E; Matuszak DL; Israel E; Woodall H; Highsmith H; Flynn J. Preventive therapy for tuberculosis in Maryland. 793.
- ULTRASONOGRAPHY**  
Tenner MS. Neurosonology: Its place in diagnostic imaging. 579.
- UNITED STATES HEALTH CARE FINANCING ADMINISTRATION**  
Lee-Llacer RL. It works when we all are together—physicians and representatives alike... [letter]. 15.



URETHRAL DISEASES

Weiss RD; Hrehorovich VR. An unusual manifestation of Wegener's granulomatosis. 271.

VAGINAL SMEARS

DeBoy JM; Jarboe BR. Maryland's cytology labs: 1989-90 proficiency testing results. 107.

VASODILATOR AGENTS

Rubin LJ. New concepts in the treatment of primary pulmonary hypertension. 209.

Vaswani S. see Dart R.

Veltri EP; Aarons D; Juanteguy J. The automatic implantable cardioverter-defibrillator: Update 1990. 463.

—see also Alicea AE.

—see also Ballas SL.

VENTRICULAR FUNCTION

Perez-Alard J; Desai PR; Sirithara R; Papadopoulos C. Correlation of Holter monitoring and left ventricular function to signal-averaged electrocardiogram after myocardial infarction. 375.

VIRAL DISEASES

Edelman R; Levine MM. Enteric vaccines. 199.

VIRAL VACCINES

Edelman R; Levine MM. Enteric vaccines. 199.

Vogel RA. The spectrum of treatment for coronary artery disease: Medical regression to high-risk angioplasty. 219.

WAGNER, HENRY N., JR.

Wagner HN Jr. Henry N. Wagner Jr. MD: Winner of the American Medical Association's Scientific Achievement Award [interview by Michelle Burke and Betsy Newman]. 557.

Walsh PC. Members in the news. 953.

Wang H. see Capito PR.

Warren JW. see Cohn JA.

WEGENER'S GRANULOMATOSIS

Weiss RD; Hrehorovich VR. An unusual manifestation of Wegener's granulomatosis. 271.

Weiss RD; Hrehorovich VR. An unusual manifestation of Wegener's granulomatosis. 271.

Weltz MD. Members in the news. 1035.

Wilber JF. The human thyrotropin-releasing hormone gene: An application of molecular biology to contemporary endocrinology research. 195.

WILSON, DONALD E.

Newman B. Donald E. Wilson MD — Dean of the University of Maryland School of Medicine: An interview with MMJ's editor. 1074.

Winn T; Tayback M; Israel E. Mortality due to septicemia in the elderly: Factors accounting for a rapid rise. 803.

Woodall H. see Rabindran E.

Woodward TE; Saunders E; Kushner HA; Mackowiak PA; Calia FM. Clinical care, education, and research at the University of Maryland School of Medicine, 1807-1991. 173.

Woody R. see Stern BJ.

Word Rounds. Column. 299, 407, 764, 1032, 1109.

WOUNDS AND INJURIES

DeFazio A; Flynn JPG; Kelly MP. Potential for missed diagnosis in rehabilitation patients with a high-risk lifestyle [letter]. 984.

Sidky I; Daikoku NH; Gopal J. Insignificant blunt maternal trauma with lethal fetal outcome: A case report. 1083.

Yanamadala S. see Dart R.

Zacur HA. Members in the news. 409.

Ziminski CM. Autoantibodies and SLE. 901.

Zizic TM. Vascular lesions in SLE. 887.



Index compiled by Lisa S. Pratt MLS, Librarian  
Medical and Chirurgical Faculty of Maryland

MedChi

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

194th ANNUAL MEETING

*Mini-invasion and Megatreatments*

*Thursday, Friday and Saturday April 30, May 1 and May 2, 1992*

AT THE OMNI INNER HARBOR HOTEL  
BALTIMORE, MD

For more information call  
(301) 539-0872 or (800) 492-1056 in MD.  
For hotel reservations call (301) 752-1100

# A MEDICAL TEST SHOULD **NOT** SCARE PEOPLE HALF TO DEATH!



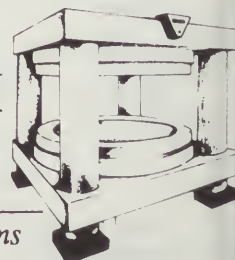
Having a health problem is scary enough. Finding out what is wrong doesn't have to be! In our state-of-the-art ACCESS<sup>TM</sup> MRI system with its "open-air" design, people don't feel like they are in a tunnel with a train coming at them. We can scan patients for whom conventional MRI is impossible. We can scan claustrophobics, the obese (up to 400 pounds), the elderly and children. Our team of trained professionals will help your staff provide the best care available to your patients.

At the Greater Baltimore MRI Center, Inc., we make it easier for you to diagnose your patients' problems.



**ACCESSIBLE MRI of  
BALTIMORE COUNTY, INC.**

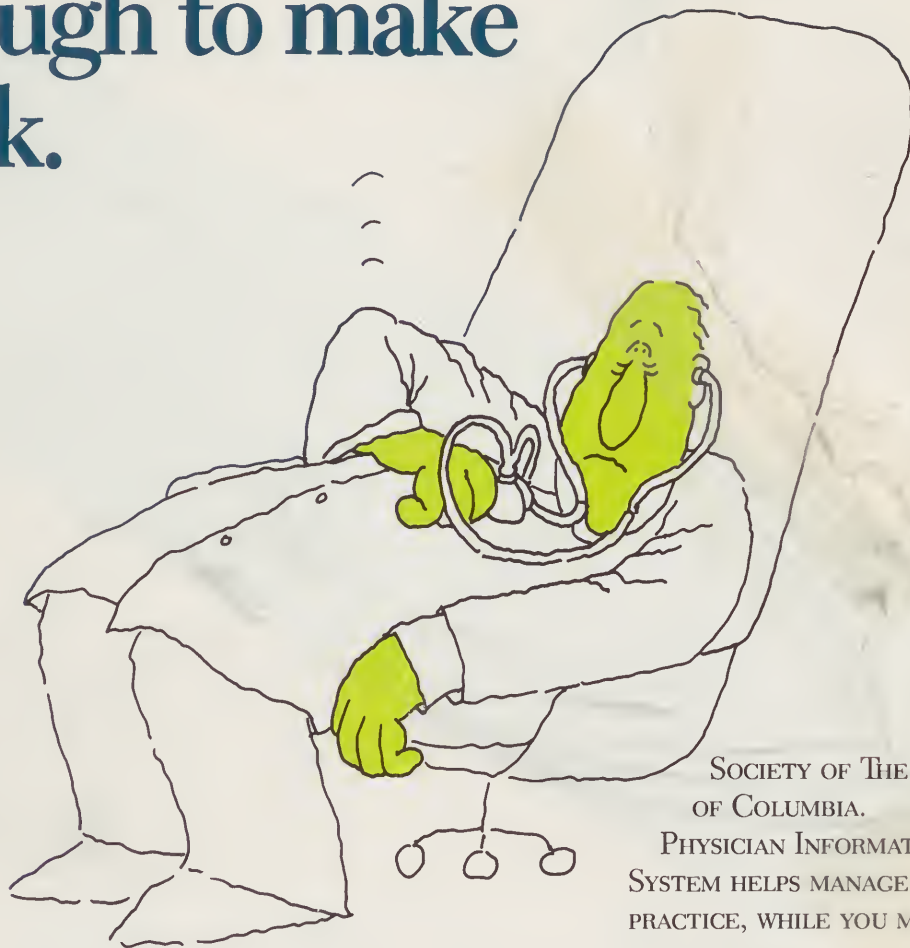
110 West Road  
Suite 212  
Towson, MD 21204  
**(301) 825-4MRI**



*Magnetic Resonance Imaging without claustrophobia or noise associated with other systems*



# Competition, HMOs, Insurance and slow-paying patients... it's enough to make you sick.



THE PROBLEMS  
OF MANAGING A  
PRACTICE TODAY  
CAN REALLY MAKE  
YOU SICK.

EVEN WORSE,  
THEY CAN MAKE THE  
BUSINESS END OF YOUR PRACTICE  
SICK, TOO. THAT'S WHERE WE  
CAN HELP.

WE'RE CBSI, THE LEADER IN  
MEDICAL OFFICE AUTOMATION  
SYSTEMS SINCE 1977. OUR PHYSI-  
CIAN INFORMATION SYSTEM  
SUBMITS YOUR INSURANCE  
FORMS ELECTRONICALLY, POSTS  
PAYMENTS AND ADJUSTMENTS  
AUTOMATICALLY, AND RUSHES  
YOU COMPLETE, UP-TO-THE-  
MINUTE PATIENT CLINICAL AND  
FINANCIAL DATA. CURRENTLY  
RELIED UPON BY MORE THAN

**ALPHA MICROSYSTEMS**  
RIGHT FROM THE START.

5,000 PHYSICIANS IN OVER 50  
MEDICAL SPECIALTIES AROUND  
THE AREA. MORE THAN 99% OF  
THESE SYSTEMS ARE STILL IN USE  
TODAY BECAUSE THEY'RE FLEX-  
IBLE, ADAPTABLE AND CBSI  
BACKS THEM WITH UNPARAL-  
LELED HARDWARE MAINTEN-  
ANCE, CUSTOMER SUPPORT  
AND TRAINING.

SINCE 1981, CBSI CONTINUES  
TO BE THE ONLY PROVIDER OF  
MEDICAL OFFICE AUTOMATION  
ENDORSED BY THE MEDICAL

SOCIETY OF THE DISTRICT  
OF COLUMBIA.

PHYSICIAN INFORMATION  
SYSTEM HELPS MANAGE YOUR  
PRACTICE, WHILE YOU MANAGE  
YOUR PATIENTS.

CALL 770-2292 RIGHT NOW TO  
FIND OUT MORE ABOUT PHYSICIAN  
INFORMATION SYSTEM. IN  
MARYLAND, CALL TOLL-FREE AT  
1-800-638-6364.

# CBSI

COMPUTER BUSINESS SYSTEMS, INC.

**YOUR PRACTICE IS OUR BUSINESS.**

6211 Executive Boulevard,  
Rockville, Maryland 20852  
(301) 770-2292  
1-800-638-6364 in Maryland

An Affiliate Member of MedServ



# Why buy an office automation system that doesn't offer a long-term solution?



## ACCLAIM™ from Sentient is the total system solution.

A lot of medical practices are planning to invest in an office automation system. But a lot of the systems out there just don't offer the comprehensive functions and long-term expandability that your practice may need.

### **IBM® and compatible hardware.**

The ACCLAIM system operates on IBM and compatible hardware, so you know you're getting the quality standard of the industry. And it's completely expandable, so it can grow as your practice grows.

### **Long-term support.**

ACCLAIM is the system solution that fits your needs today. And Sentient's software engineers, customer trainers, and telephone support people

are always there to make sure your system fits your needs over the years to come.

### **Easy to operate.**

Even if your staff has no previous computer experience, ACCLAIM is simple to operate effectively and efficiently. Complete training is included in the purchase.

When you're thinking about office automation, call Sentient first, and find out what ACCLAIM can do for you.

**1-800-247-9419**  
(In the D.C. Metro area  
call 1-301-929-7600.)

**SENTIENT**  
SYSTEMS

*We set the standard in medical computing.*